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Part II

Environmental Protection Agency

Effluent Guidelines Plan; Notice

ENVIRONMENTAL PROTECTION AGENCY

[FRL 3626-3]

Effluent Guidelines Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of plan to review and promulgate effluent guideline regulations.

SUMMARY: This notice announces the Agency's plans for reviewing and revising existing effluent guidelines and promulgating new effluent guidelines to implement section 304(m) of the Clean Water Act.

EFFECTIVE DATE: January 2, 1990.

ADDRESSES: On January 16, 1990, the public record for this notice will be available for review in EPA's Public Information Reference Unit, Room 2404 (Rear) (EPA Library), 401 M Street, SW., Washington, DC. The EPA public information regulation (40 CFR part 2) provides that a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Eric Strassler, Industrial Technology Division (WH-552), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, telephone 202-382-7120.

SUPPLEMENTARY INFORMATION:

I. Legal Authority

This notice is published under the authority of section 304(m) of the Clean Water Act, 33 U.S.C. 1314(m), which provides as follows:

Schedule for Review of Guidelines.

(1) Publication.—Within 12 months after the date of the enactment of the Water Quality Act of 1987, and biennially thereafter, the Administrator shall publish in the **Federal Register** a plan which shall—

(A) Establish a schedule for the annual review and revision of promulgated effluent guidelines, in accordance with subsection (b) of this section:

(B) Identify categories of sources discharging toxic or nonconventional pollutants for which guidelines under subsection (b)(2) of this section and section 306 have not previously been published; and

(C) Establish a schedule for promulgation of effluent guidelines for categories identified in subparagraph (B), under which promulgation of such guidelines shall be no later than 4 years after such date of enactment for categories identified in the first published plan or 3 years after the publication of the plan for categories identified in later published plans.

(2) Public Review.—The Administrator shall provide for public review and comment on the plan prior to final publication.

II. Introduction

A. Purpose of Today's Notice

Today's notice announces the Agency's first biennial plan for review and revision of existing effluent guidelines and promulgation of new effluent guidelines to implement section 304(m) of the Clean Water Act, as amended by the Water Quality Act of 1987 (Pub. L. 100-4).

EPA published a notice of its proposed plan to implement section 304 (m) on August 25, 1988 (53 FR 32584). The Agency invited comment on the notice until October 25, 1988. Today's notice summarizes and addresses the major comments the Agency received.

B. Overview of Today's Notice

For the past 12 years, a consent decree settling litigation with the Natural Resources Defense Council (NRDC) and others, described below, has largely set the Agency's agenda for the development of effluent guidelines. With a few exceptions, EPA's efforts during this period have been directed to the completion of rulemaking activities prescribed by the consent decree. Although rulemaking for one industry category remains to be completed, the Agency now has largely discharged its responsibilities under the decree.

With the completion of these responsibilities, the Agency has turned to the planning process established by section 304(m) to set its agenda for future rulemaking. As is explained in more detail below, section 304(m) directs that EPA issue biennial plans for the promulgation of new effluent limitations guidelines and the review and revision of existing guidelines. Specifically, section 304(m) directs that Agency, every 2 years, to identify categories of sources discharging toxic or nonconventional pollutants for which effluent limitations guidelines have not

been published, to establish for each source identified a schedule for the promulgation of guidelines, and to establish schedules for the review and revision of previously promulgated guidelines.

There are many industry categories discharging toxic or nonconventional pollutants for which guidelines have not been published. EPA believes section 304(m) directs the Agency to select categories for promulgation of new guidelines and revision of existing guidelines and identify them in the first and subsequent 304(m) plans so that a phased, orderly process of effluent guideline rulemaking is established. This notice describes how the Agency has selected industry categories for which new guidelines will be promulgated and existing guidelines will be revised as a result of inclusion in today's first 304(m) plan.

The Agency is announcing in today's plan that it intends to promulgate new effluent limitations guidelines for five categories of dischargers; to revise existing guidelines for three categories; to review existing guidelines for three categories to determine whether they should be revised; and to study eight categories further to determine whether rulemaking should be initiated to establish guidelines covering them, as follows:

1. *New Guidelines*
   - Pesticide Chemicals
   - Offshore Oil and Gas Extraction
   - Hazardous Waste Treatment, Phase 1
   - Machinery Manufacturing and Rebuilding
   - Coastal Oil and Gas Extraction
2. *Revisions to Existing Guidelines*
   - Organic Chemicals, Plastics and Synthetic Fibers
   - Pharmaceutical Manufacturing
   - Pulp, Paper, and Paperboard
3. *Reviews of Existing Guidelines*
   - Petroleum Refining
   - Timber Products Processing
   - Textile Mills
4. *Studies*
   - Drum Reconditioning
   - Hospitals
   - Industrial Laundries
   - Paint Formulating
   - Solvent Recycling
   - Stripper Oil and Gas Extraction
   - Transportation Equipment Cleaning
   - Used Oil Reclamation and Re-Refining

In issuing future biennial plans, the Agency will ensure that appropriate rulemaking priorities are set, based on information regarding categories discharging toxic or nonconventional pollutants that is available at the time those plans are published.

III. Effluent Guidelines Planning: Legal Background

A. Requirements of Section 304(m)

Section 304(m), added by the Water Quality Act of 1987, establishes a new process for planning the development of effluent limitations guidelines and standards under the Clean Water Act. Section 304(m) directs the Agency, every 2 years, to publish in the **Federal Register** a plan that identifies "categories of sources discharging toxic or nonconventional pollutants" for which effluent limitation guidelines representing best available technology economically achievable (BAT) and new source performance standards (NSPS) have not previously been published. It also directs that the biennial plans include a schedule "for the annual review and revision of promulgated effluent guidelines * * *" Section 304(m) contains no requirement that the Agency identify any specific sources of toxic or nonconventional pollutants in the first or subsequent plans, nor does it contain criteria for determining when to include any categories in a biennial plan.

Under section 304(m), the Agency's biennial plans are to "establish a schedule" for the promulgation of new guidelines and standards covering categories discharging toxic or nonconventional pollutants. For categories identified in the first plan, the schedule is to call for the promulgation of new guidelines by February 1991, 4 years after the date of enactment of the Water Quality Act. For categories identified in biennial plans after the first plan, the schedule is to call for promulgation of guidelines and standards for identified categories no later than 3 years after publication of the plan. (As the first 304(m) plan was to be published within 1 year after the date of enactment, the promulgation of guidelines for categories identified in the first plan also falls 3 years after publication of the plan.) Section 304(m) does not specify any deadline for the promulgation of revised guidelines under the "schedule[s] for the annual review and revision of promulgated effluent guidelines" required by section 304(m)(1)(A).

One commenter, the Natural Resources Defense Council (NRDC), contends that section 304(m) requires EPA, in its first biennial plan, to identify all categories of sources discharging more than trivial amounts of toxic or nonconventional pollutants for which guidelines have not previously been published. NRDC comments enumerated at least 70 such categories and asserted that section 304(m) requires EPA to promulgate guidelines for all of them by February 1991. NRDC has filed suit against the Agency, alleging violation of section 304(m) and other statutory authorities requiring promulgation of effluent limitations guidelines, new source performance standards and pretreatment standards (*NRDC and Public Citizen, Inc.* v. *Reilly*, D.D.C. No. 89–2980).

EPA disagrees with NRDC's reading of the statute. EPA interprets section 304(m) as directing that the Agency set priorities for the promulgation of new guidelines and revision of existing guidelines and establish a phased, orderly planning process that increases the pace of the Agency's effluent guidelines rulemaking. The Agency's interpretation is based on the statutory language, the legislative history of section 304(m) as a whole, the prior history of the guidelines development program, and the Agency's judgment as to how the policies of the Clean Water Act in general and section 304(m) in particular can best be effectuated.

Since guidelines under the Clean Water Act were first issued in 1974, EPA has promulgated effluent guidelines and standards covering 51 categories of dischargers. Since 1976, the Agency has focused its efforts to develop regulations covering toxic and nonconventional pollutants on 34 industry categories that were listed in a consent decree entered into that year with NRDC and others. [*NRDC* v. *Train*, 8 E.R.C. 2120 (D.D.C. 1976), as modified.] The Agency is now completing the last of the rulemaking projects specified in that consent decree 13 years ago. Many of the regulations covering industries discharging toxic and nonconventional pollutants took 5 years or more for the Agency to develop. Section 304(m) should be construed in light of this background. [See Sutherland, *Statutes and Statutory Construction*, sec. 48.03 (N. Singer 4th Ed. 1984).]

The statutory requirement for biennial identification of sources, coupled with the three-year statutory schedule for the issuance of new guidelines for identified sources, indicates that Congress did not intend to require the Agency to identify all categories of sources discharging toxic or nonconventional pollutants in the first plan. The inclusion of all industries discharging toxic or nonconventional pollutants in the first 304(m) plan would give rise to a duty to issue guidelines for each of them by February, 1991. Had Congress intended such a dramatic increase in the pace of the guidelines program, it is reasonable to expect that this would have been

made clear on the face of the statute and in the legislative history.

To the contrary, the Conference Committee report on the Water Quality Act devotes little attention to section 304(m), explaining it briefly as "providing for development of a plan which will include *a schedule for periodic review and revision of promulgated effluent guidelines*, categorization of toxic and nonconventional pollutant sources for which effluent limitations guidelines and new source performance standards have not been established, and *a schedule for promulgation of effluent limitations for such categories of sources.*" [Conference Report No. 99–1004 (99th Congress, 2nd Session, 1986), pp. 129–30, emphasis added]. As sec. 304(m) contains no deadline for the promulgation of revised guidelines after review, this language confirms that the Agency, in its biennial plans, may set an appropriate pace for publishing revisions to existing guidelines. EPA believes this language similarly reflects Congress' intent that EPA biennially set priorities for the promulgation of new guidelines. Otherwise—in light of the command of Section 304(m)(1)(C) that the deadline for issuance of new guidelines shall be "3 years after the publication of the plan"—the Committee Report would have made it clear that Congress expected EPA to issue guidelines for all categories discharging toxic or nonconventional pollutants by February 1991.

Finally, if all categories discharging toxic or nonconventional pollutants were included in the first 304(m) plan, the biennial planning process thereafter would be limited to examination and listing of a handful of new industries or industries, if any, for which new information regarding the discharge of toxic or nonconventional pollutants comes to light. There is no indication that Congress intended the Agency's biennial guidelines planning to be such a narrow exercise.

The legislative history of section 304(m) reflects that Congress was aware specifically of the rate at which the Agency had promulgated guidelines since 1977. [See Senate Report No. 99–50 (99th Congress, 1st Session, 1985), p. 3.] To be sure, Congress expressed frustration with "the slow pace in which these regulations are promulgated * * *" *Id.* Yet, at the time it enacted the Water Quality Act of 1987, Congress did not repeal sections 304(b)(2)(B) and 306, which set out the detailed technical, economic and environmental factors that the Agency must study—and for which it must create an adequate rulemaking record—in promulgating BAT guidelines and new source performance standards. Nor did Congress dramatically increase appropriations to the Agency to the level that would be required for the Agency to issue new guidelines by February 1991 for all categories discharging toxic or nonconventional pollutants. Even if the available resources were unlimited, in the Agency's judgment insufficient data and information exist—and cannot be gathered—to issue guidelines for all such categories by February 1991. Viewing the enactment of section 304(m) in this context lends further support to the Agency's view that Congress intended EPA to establish a continuing planning process under which EPA is to increase the pace of guidelines development and set priorities for the issuance of new and revised guidelines in a manner that is consistent with the other requirements of the Clean Water Act.

Accordingly, EPA interprets section 304(m) as directing the Agency to increase the level of effort afforded to the development of effluent limitations guidelines, but to do so through a phased, orderly process that ensures adequate consideration of the technical, economic and environmental factors required by section 304(b)(2)(B) and 306. To implement this interpretation, EPA has developed a set of criteria to set priorities in identifying industries for development of new or revised effluent limitations guidelines and standards. The criteria emphasize the presence and quantity of toxic and nonconventional pollutants in the discharges to waters of the United States, and the potential impact of those discharges on the environment. The criteria also consider the utility of national guidelines covering categories of dischargers under consideration and the presence of specific legislative or judicial mandates to issue guidelines for particular categories. The Agency has applied these criteria to select categories of dischargers for which new and revised guidelines will be prepared.

In today's notice, EPA is announcing its first biennial plan under section 304(m). The plan not only implements section 304(m), but also constitutes the Agency's approach to implementation of other statutory authorities relating to the issuance of effluent guidelines (including sections 304(b), 306 and 307). Under this plan, the Agency intends to promulgate new effluent limitations guidelines for five categories of dischargers; to revise existing guidelines for three categories; to study eight categories further to determine whether rulemaking should be initiated to establish guidelines covering them; and to review existing guidelines for three categories to determine whether they should be revised. This plan reflects a significant increase in the current level of effort of the guidelines program, which in the recent past has been devoted largely to completing the guidelines required by the NRDC consent decree and obtaining the information necessary to establish priorities for future guidelines development.

For each category identified, EPA has established promulgation schedules that the Agency currently believes are attainable based on its past experience in developing effluent limitations guidelines and current information about those categories, even though the schedules extend beyond February 1991. In issuing future biennial plans, the Agency will ensure that appropriate rulemaking priorities are set, based on information regarding categories discharging toxic or nonconventional pollutants that is available at the time those plans are published.

B. Related Provisions of the Clean Water Act

The Federal Water Pollution Control Act (FWPCA) of 1972 (Pub. L. 92–500, Oct. 18, 1972) established a program to restore and maintain the integrity of the nation's waters. To implement the Act, Congress directed EPA to issue effluent limitation guidelines, pretreatment standards, and new source performance standards for industrial dischargers. These regulations were to be based principally on the degree of effluent reduction attainable through the application of control technologies. The approach includes limitations based on Best Practicable Control Technology (BPT), Best Available Technology Economically Achievable (BAT), New Source Performance Standards (NSPS), Pretreatment Standards for Existing Sources (PSES), and Pretreatment Standards for New Sources (PSNS).

The limitations and standards are implemented in permits issued through the National Pollutant Discharge Elimination System (NPDES) pursuant to section 402 of the Act for point sources discharging directly to the waters of the United States, with the pretreatment standards directly applicable to industrial users discharging to publicly owned treatment works (POTWs). Although the limitations are based on the performance capability of particular control technologies, including in some cases in process controls, dischargers may meet their requirements using

whatever combination of control methods they choose, such as manufacturing process or equipment changes, product substitution, and water re-use and recycling.

The 1977 amendments to the FWPCA, known as the Clean Water Act Amendments (Pub. L. 95-217, Dec. 27, 1977) (CWA), added an additional level of control for conventional pollutants such as biochemical oxygen demand (*BOD*) and total suspended solids (*TSS*), and stressed additional control of 65 toxic compounds or classes of compounds (from which EPA later developed a list of 126 specific "priority pollutants"). To further strengthen the toxics control program, section 304(e), added by the 1977 amendments, authorized the Administrator to establish management practices to control toxic and hazardous pollutants in plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage.

The effluent guidelines and standards promulgated by EPA reflect the several levels of regulatory stringency specified in the Act, and they also focus on different types of pollutants. Section 301(b)(1)(A) directs the achievement of effluent limitations requiring application of BPT. Effluent limitations based on BPT are generally to represent the average of the best treatment technology performance for an industrial category. For conventional pollutants listed under section 304(a)(4), section 301(b)(2)(E) directs the achievement of effluent limitations based on the performance of best conventional pollutant control technology (BCT). The Act requires that BCT limitations be established in light of a two-part "cost-reasonableness" test. The test, which assesses the relative costs of conventional pollutant removals, is described in detail in the **Federal Register** notice promulgating the final BCT rule on July 9, 1986 (51 FR 24974).

Both BPT and BCT regulations apply only to direct dischargers, i.e., those facilities that discharge directly into waters of the United States. In general, regulations are not developed to control conventional pollutants discharged by indirect dischargers (i.e., those facilities that discharge into POTWs) because the POTWs normally provide adequate treatment of these types of pollutants or they can be adequately controlled through local pretreatment limits.

For the toxic pollutants listed in section 307(a), and for nonconventional pollutants, sections 301(b)(2) (A), (C), (D) and (F) directed the achievement of effluent limitations requiring application of BAT. Effluent limitations based on BAT are to represent at a minimum the best control technology performance in the industrial category that is technologically and economically achievable.

In addition to limitations for existing direct dischargers, EPA also establishes NSPS under section 306 of the Act, based on the best available demonstrated control technology, processes operating methods or other alternatives. NSPS apply to new direct dischargers. The NSPS limitations are to be as stringent, or more stringent than BAT limitations for existing sources within the industry category or subcategory.

To ensure that effluent guidelines remain current with the state of the industry and with available control technologies, section 304(b) of the Act provides that EPA shall revise the effluent guidelines at least annually if appropriate. In addition, section 301(d) provides that EPA shall review and if appropriate, revise any effluent limitation required by section 301(b)(2).

Section 402 of the CWA provides for the issuance of permits to direct dischargers under NPDES. These permits, which are required by section 301, are issued either by EPA or by a State agency approved to administer the NPDES program. Individual NPDES permits must incorporate applicable technology-based limitations contained in guidelines and standards for the industrial category in question. Where EPA has not promulgated applicable technology-based effluent guidelines for an industry, section 402(a)(1)(B) provides that the permit must incorporate such conditions as the Administrator determines are necessary to carry out the provisions of the Act. In other words, the permit writer uses best professional judgment (BPJ) to establish limitations for the dischargers.

Indirect dischargers are regulated by the general pretreatment regulations (40 CFR part 403) and categorical pretreatment standards for new and existing sources (PSNS and PSES) covering specific industrial categories. These categorical standards under sections 307 (b) and (c) appy to the discharge of pollutants from non-domestic sources which interfere with or pass through POTWs, and are enforced by POTWs or by State or Federal authorities. The categorical pretreatment standards for existing sources covering specific industries are generally analogous to the BAT limitations imposed on direct dischargers. The standards for new sources are generally analogous to NSPS.

IV. Effluent Guidelines—Program Background

After enactment of the CWA in 1972, EPA began the development of effluent guidelines, concentrating on the industry categories listed specifically in section 306(b)(1)(A) as sources for which new source performance standards were to be developed. The first round of guidelines, promulgated in 1974 and 1975, typically contained BPT, BAT, NSPS, PSES and PSNS limits for conventional pollutants, chemical oxygen demand (*COD*), phenols and several metals for 28 industry categories. (The guidelines for some industry categories did not include BAT or pretreatment limits.)

In 1976, EPA entered into a consent decree with NRDC and others, bringing to a conclusion four separate actions challenging EPA's regulation of the discharges of toxic pollutants into the waters of the United States. Under that consent decree, the Agency was to initiate rulemaking proceedings to develop BAT guidelines, new source performance standards and pretreatment standards covering 34 specified point source categories in accordance with an agreed upon schedule. The guidelines were to control any of 65 toxic pollutants or classes of pollutants, listed in the consent decree, that were found in the discharges of the covered industries. The 1977 amendments to sections 301 and 307 of the Clean Water Act codified many of these provisions of the consent decree.

The consent decree has largely set the rulemaking agenda in the effluent guidelines development program. In recent years most of the program's resources have been devoted to completion of regulations required by the decree. The Agency also has responded to emerging problems, such as new findings on discharges from the pulp and paper industry, and findings on indirect dischargers, as described in the *Domestic Sewage Study*. Most recently, the Agency has engaged in a process of sampling and data collection to implement section 304(m) and establish a plan of action for the future of the guidelines program.

The requirements of the consent decree and the 1977 amendments created substantial regulatory challenges for the Agency. EPA found that a complex industry characterization process was necessary to support the development of BAT rules. The economic achievability analyses required a detailed demographic picture of each industry on which to assess the impacts of treatment technology

alternatives. Considerable time and resources were necessary to conduct surveys and studies to compile a comprehensive profile for each industry. The preproposed rule phase of an effluent guideline project typically required about 3 years. For many of the proposed rules, the Agency received extensive public comments, and additional data collections were needed for some industries. The period between proposed and final rulemaking notices was often 2 years or more.

In addition, there were no proven analytical methods for the detection and/or quantification of many of the 65 toxic pollutants that EPA was to control. A great deal of time was required to develop methods that would be reliable for wastewaters with a wide variety of characteristics. The Agency also was faced with responding to legal challenges to many of its first-round guidelines.

These factors slowed the Agency's progress in developing regulations under the consent decree. In 1979, the decree was modified to include a revised schedule for promulgation of new or revised BAT regulations, new source performance standards and pretreatment standards for the covered industries (12 E.R.C. 1833, D.D.C. 1979). Because of the complexity of the task, EPA still was not able to meet all of the modified deadlines, and several times obtained court approval for extensions. The Agency promulgated regulations for all but one of the covered industries between 1979 and 1987. EPA is now completing the last consent decree rulemaking project, covering the Pesticides industry.

In the course of preparing 51 effluent guidelines, EPA has accumulated substantial expertise in the steps necessary to promulgate a defensible regulation establishing effluent limitations guidelines and standards. Based on this expertise, the schedules for promulgation of new or revised guidelines that are set out in today's notice reflect EPA's best current estimate of the time necessary to promulgate technically and scientifically adequate regulations for each category. This section of the notice summarizes the various tasks which the Agency must complete in a typical effluent guideline rulemaking.

Initially, the Agency must establish the scope of the rulemaking and the dimensions of the rulemaking project by defining the industry category. For some industry categories, such as the Inorganic Chemicals Manufacturing category (40 CFR part 415), the Agency was able to use readily available tools such as the Standard Industrial Classification (SIC) Manual in defining the category to be addressed. For others, such as the Machinery Manufacturing and Rebuilding category ("MM&R"), the process has been more difficult. In defining the MM&R category, the Agency first examined what industrial activities had not been regulated in the "Machinery and Mechanical Products" category as identified in the 1976 consent decree. From that, the Agency identified approximately 89,000 facilities that manufacture or rebuild machinery but that were not covered by previously promulgated guidelines. The Agency then examined whether the Metal Finishing category (40 CFR part 433) would cover these establishments and found that it did cover approximately 13,000 of the 89,000 identified. EPA then examined the products manufactured and processes employed by the remaining 76,000 facilities and by facilities with related processes and facilities. The Agency was unable, from a process or practical basis, to differentiate between manufacturing, maintenance and rebuilding. Accordingly, EPA determined these three classifications should be evaluated together.

Next, the Agency determines the size of the category as it has been defined, using all available sources. Given the diversity of regulatory categories, no one source suffices to establish size. At various times, EPA has used one or more of the following sources: standard published sources, information available through trade associations, data purchased from the Dun and Bradstreet, Inc. data base, other publicly available data bases, census data, other U.S. Government information and any available EPA data base. For MM&R, for example, the Agency found that its original estimate of 89,000 facilities had included only the larger manufacturing facilities. The Agency currently believes this category includes over 278,000 facilities with 10 or more employees, and totals approximately 970,000 facilities. If a category is very large, the Agency will determine whether it can be broken down into appropriate categories or subcategories. If more than one subcategory can be identified, the Agency may need to establish priorities for regulation.

Regulatory information about industry categories is obtained largely through survey questionnaires and on-site wastewater sampling. Survey questionnaires solicit detailed information necessary to assess the statutory rulemaking factors (particularly technological and economic achievability of available controls), water use, production processes, and wastewater treatment and disposal practices. A significant portion of the Agency's questionnaires typically seek information necessary to assess economic achievability.

If the survey questionnaire is expected to go to more than nine entities, clearance from the Office of Management and Budget (OMB) is required under the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). Typically, the Agency will construct a questionnaire and obtain public reaction on it. Often the Agency will pre-test the questionnaire by having one or more facilities complete the draft form. Formal submission to OMB will follow completion of these activities. OMB review can take up to 90 days from official submission of the questionnaire.

The Agency typically requests industry responses to survey questionnaires within 30 to 60 days of receipt. While most recipients do respond within the requested time period, a certain number of questionnaires require follow up activity, ranging from telephone calls to enforcement actions under section 308 of the Clean Water Act. For example, for a questionnaire supporting the current Pesticide Chemicals rulemaking effort, the Agency received the last response one full year after the questionnaire was distributed. In addition, the Agency spends considerable time and effort responding to concerns and questions about the questionnaire. In particular, recipients of questionnaires often seek reassurance concerning the Agency's handling of material claimed to be confidential. Also, despite the Agency's best efforts to resolve problems with the questionnaire before and after the pre-test, some firms have trouble completing the responses. This may also extend the response period.

Generally, the Agency is able to define its wastewater sampling effort based on information received in response to the questionnaires. While the questionnaire provides information about production processes, water uses and, in general terms, what is found in the industry's wastewater, on-site sampling is required to characterize specifically the pollutants found in discharges. This is because direct dischargers are ordinarily required to do limited, though regular, sampling under the monitoring provisions of their permits, and few indirect dischargers are required to do any frequent testing. Moreover, site visits are necessary to assess pollutant control technology. Scheduling of site visits depends on a number of factors. First, sampling is generally conducted by contractors

selected by the strict standards of the government contracting process. (A discussion of the contracting process appears below.) The logistics of coordinating the sampling can be extensive. Second, successful site visits require the presence of knowledgeable plant personnel to answer pertinent questions and to assist the sampling team in various ways. Third, site visits are useful only if plants are operating under "normal" conditions; therefore, visits must be scheduled to avoid "down time" periods for maintenance or other interruptions. Finally, scheduling of a site visit may depend on plant production schedules, if a plant produces numerous products or changes its product mix as part of a production cycle.

Sampling and site visits and many other tasks related to the preparation of guidelines, including numerous efforts related to economic, statistical and environmental analyses, are generally accomplished with the assistance of EPA contractors under supervision of Agency program staff. In addition, contract laboratories, rather than EPA laboratories, ordinarily analyze these samples. (EPA laboratories generally are devoted to research and development.) Hiring contractors is a rigorous and somewhat protracted process that is dictated by Federal contracting requirements. Among the typical steps are preparation by the Agency of a Request for Proposals (RFP), publication of notice of the Agency's contracting requirement, review and evaluation of proposals, determination by the Agency of the number of proposals that are in the competitive range, identification of any weaknesses or deficiencies with the applicants deemed to be competitive, review and evaluation of revised proposals or "best and final" offers, and the recommendation of awards to a source selection official. Excluding the possibility of a bid protest, the process usually takes between 8 to 12 months or more. In the event that the contract is set for a fixed time, and the life of the guideline project is longer than a contract's outer time limit, it is possible that the process would need to be repeated.

Most of the effluent sampling and analysis that has supported effluent guideline regulations promulgated to date has been conducted and funded by EPA. On occasion, however, these activities have been pursued on a cooperative basis with industry parties. For example, EPA and numerous pulp and paper manufacturers participated in a cooperative effort to sample and analyze effluent, wastewater treatment sludge and pulp from domestic mills that bleach pulp in their production processes. Despite the obvious advantage that such a cooperative situation presents to the Agency in terms of reduced cost, it is not clear that such a process shortens the time required to promulgate a regulation. In fact, the negotiated nature of such a cooperative program may actually lengthen the analytical data collection phase of the regulation development process.

When sampling is completed, wastewater samples are sent to laboratories for analysis. Contracts with the laboratories establish a response time frame, but also generally set a maximum number of analyses per month. Consequently, while the Agency generally assumes it will receive the analytical results 60 days after sampling, the actual response time can be longer than 60 days. Analytical response time can also be lengthened if the samples require reanalysis to confirm first round results. This may be necessary, for example, if the sample contains a large number of pollutants or contains chemically similar pollutants.

Responses to questionnaires are generally written on the questionnaire form itself. Together with results from sampling and site visits, the information must be entered into computer files. This is a considerable task that generally precedes the major analytical work and must be performed according to quality assurance procedures. Frequently, this effort is slowed by the need to interpret the information as submitted by the respondent and to reconcile discrepancies. However, only when it is completed, can the Agency conduct the statistical, economic and engineering analyses necessary to develop treatment control options and to select one or more of these options tentatively as the basis for a rulemaking proposal.

Rulemaking proposals, as well as final rules and other rulemaking notices (such as notices of the availability of new data) all undergo thorough internal Agency review before publication in the **Federal Register.** The process of internal review is designed not only to ensure the quality and completeness of regulatory packages, but to expedite rulemaking by the early identification of issues and resolution of any disagreements among concerned EPA offices.

Within the Agency, an individual "work group" oversees the development of each effluent guideline and the supporting record. The purpose of work groups is to provide for full consultation and coordination on a rulemaking package among all EPA offices (often including regional offices) that participate in the rulemaking. After the work group develops treatment control options for a guideline, the options typically are presented to the Administrator as the basis for the proposed guideline. After "options selection", work groups must reach closure on a rulemaking package that implements the proposal of the selected treatment option before review of the package at higher levels. "Work Group Closure" on a regulatory package that proposes a guideline occurs when the work group concludes that the major issues presented by a rulemaking package are resolved and that the package is generally ready for consideration by the Agency's senior management. A closure meeting usually follows review and revision of several drafts of a rulemaking package. This can take many months.

Following Work Group Closure, several steps must be taken before publication of a proposed guideline. These steps usually begin with revision of the preamble, proposed rule and associated documents in response to the comments raised by concerned offices at Work Group Closure. After the completion of revisions to these documents, which can be quite lengthy, final review begins. This includes a review by senior Agency management known as the "Red Border" process, separate review by OMB under Executive Order 12291, formal recommendation by the Assistant Administrator for Water and signature by the Administrator. This final review is not a mere formality; the Agency usually allows about 4 months to accomplish these steps. Any unresolved issues that remain after Work Group Closure must be settled. Once the Administrator approves the proposal, the rulemaking proposal can be published in the **Federal Register,** opening the public comment period. Comment periods generally are set for 60 to 90 days, but sometimes extend beyond 90 days for particularly complicated proposals.

At the close of the comment period on the proposed rule, the work group reviews the comments to identify significant issues and to initiate the preparation of responses to comments. Responding to comments submitted in guidelines rulemaking is often an enormous task because of the variety of processes and pollutants covered by the proposal, the range of treatment technologies that may be required, the different types of manufacturers in the category to be covered, and the number

of parties and citizens affected by the rule. (In the recent rulemaking setting guidelines for the Organic Chemicals, Plastics and Synthetic Fibers category (40 CFR part 414), the Agency received over 15,000 pages of comments.) During this period, the Agency also revises the technical support documents and other analyses in light of comments received.

Ultimately the Agency must decide what modifications to the proposed rule must be made in response to the public comments or in response to new data developed by EPA itself since the proposal. Sometimes it is necessary to re-propose all or parts of a rule or to publish a supplemental notice or notice of data availability. For example, in the Organic Chemicals rulemaking, the Agency issued three notices and requests for comments after the original proposal. If any notices must be issued between the publication of the rulemaking proposal and the promulgation of the final rule, these notices undergo internal review with many of the same requirements before publication and are subject to comment by the public.

Finally, the Agency prepares a final rulemaking package. This package must reflect appropriate resolution of comments received and issues raised since the proposal. Typically, "Options Selection" at the Administrator's level again takes place. In addition, the rulemaking record, which often includes tens of thousands of pages, must be assembled. The final rule is subject to the same review process as rulemaking proposals, including Work Group Closure, review in Red Border, and separate review by OMB before signature by the Administrator.

After publication of a final rule, the Agency must continue to devote significant time and resources to the rulemaking project. For example, the project staff works with staff from EPA regional offices and States on implementation of the guideline. In the event of a challenge in the United States Court of Appeals, the project staff must spend a great deal of additional time assisting in the defense of the rule. Project staff sometimes also become involved in special studies relating to the published rule. For example, pursuant to a directive in the 1989 appropriations bill (Pub. L. 100-404, August 19, 1988), the Agency performed a detailed study evaluating the discharges from raw sugar cane mills in Hawaii, to determine whether those mills should be afforded relief from existing guidelines as a result of economic and other factors. Until these post-publication activities end, the resources involved frequently cannot be transferred to the preparation of other guidelines.

The Agency is examining whether the time required for guidelines development can be reduced. In view of the fact that EPA is embarking on a new phase of guideline development, the Agency is also exploring ways in which the regulatory process can be made more efficient.

V. Effluent Guidelines Planning Process

A. Overview of Development of Today's Biennial Plan

In the August 25, 1988 proposal notice, EPA stated that in establishing priorities for the preparation of new and revised guidelines, it planned to (1) review existing technical studies and reports, notably the Domestic Sewage Study (DSS) (Report to Congress on the Discharge of Hazardous Wastes to Publicly Owned Treatment Works, EPA-530/SW-86-004, February 1986), the National Dioxin Study (Report to Congress, EPA-530/SW-87-025, August 1987), and the Oil and Gas Wastes Study (Report to Congress: Management of Wastes from the Exploration, Development, and Production of Crude Oil, Natural Gas and Geothermal Energy, EPA-530/SW-88-003, December 1987); (2) consult with EPA regional offices, States and publicly owned treatment works (POTWs) to obtain the benefit of their experience and judgment in setting rulemaking priorities; (3) consider legal challenges, variance requests and petitions for modification of existing guidelines as sources of information concerning priorities for revisions to those guidelines; and (4) consider public comments on the proposal notice. EPA identified six categories of dischargers for which rulemaking efforts were in progress, and for which new or revised guidelines were expected to be promulgated. The Agency identified four addition categories that were under review as candidates for revised guidelines or regulation of additional pollutants and ten more that were under review as candidates for new guidelines. Nine of the latter were selected on the basis of the findings of the DSS.

EPA has refined the foregoing strategy and followed it in preparing today's lists of categories for which the Agency will promulgate new or revised guidelines. The Agency has considered as candidates for 304(m) listing all of the categories of dischargers analyzed or brought to the Agency's attention as a result of review described in section V.B.3 of today's notice.

Specifically, in addition to the DSS, the National Dioxin Study and the Oil and Gas Wastes Study, EPA reviewed the Small Quantity Generator Study (National Small Quantity Hazardous Waste Generator Survey: Final Report; Office of Solid Waste, February 1985) and initial data from the National Bioaccumulation Study, which is currently being prepared. EPA considered pertinent information received from States and POTWs in the course of informal discussions, technical workshops, development of program guidance, and development of technical and field support. EPA also reviewed requests by industrial dischargers for variances from existing guidelines and petitions for modification of guidelines, and citizen reports and petitions concerning particular industries and pollutants. Following publication of the proposal, each of the Agency's ten regional offices nominated categories of dischargers for listing under section 304(m), based on their experience in issuing permits to categories of dischargers and carrying out other regulatory functions under the Clean Water Act. Finally, EPA considered the industry categories that commenters on the proposal urged the Agency to list under section 304(m). One commenter, NRDC, referred to additional categories discharging toxic or nonconventional pollutants that it argued should be listed.

EPA selected 15 categories of dischargers for more detailed study and comparison for purposes of setting regulatory priorities. The Agency judged that for these fifteen, the quality of available data and the known quantity of discharges of toxic and nonconventional pollutants justified affording them a high priority status in the 304(m) planning process. In addition, sufficient data were available for these 15 categories to make meaningful inter-category comparisons. For each of the 15 high priority categories, EPA prepared a "Preliminary Data Summary" (defined below) to provide a basis for systematic comparison. EPA then applied the ranking factors discussed in section V.B.1 of today's notice to develop the industry category rankings that determine the categories that EPA intends to regulate over the next several years.

There are numerous additional categories of dischargers of toxic or nonconventional pollutants that the Agency has considered in preparing today's notice but that are not among the categories that EPA ranked or listed, even though they might ultimately merit listing under section 304(m) for the

preparation of new or revised guidelines. In general, EPA had data for these categories indicating that they discharge lower quantities of toxic or nonconventional pollutants than the 15 higher priority categories, or EPA had less reliable data or no data concerning the presence or quantity of toxic or nonconventional pollutants in their waste streams. In preparing future biennial plans under section 304(m), EPA intends to review and reevaluate all categories that may discharge toxic or nonconventional pollutants, but that are not among the priority categories listed in today's notice. EPA will then collect additional data, as appropriate, and will determine which of these categories merit priority for inclusion in future biennial 304(m) plans.

EPA's rulemaking priorities evolve as the Agency gains more knowledge of and understanding about discharging industry categories. The Agency's analysis of those categories is complicated by the limitations of the data at hand and the difficulty of quantifiction of some environmental phenomena. This can lead to situations where the Agency will decide to initiate rulemaking for a particular industry because there are sufficient data on hand to justify such action, while delaying rulemaking covering another industry, pending the collection of additional data.

Once the Agency decides to initiate rulemaking for a category, it must commit extensive staff and fiscal resources for several years. Therefore the decision to initiate a rulemaking project is made with caution. The Agency is allocating its resources so that a balance of rulemaking actions and preliminary studies can be conducted simultaneously.

EPA is including in today's notice plans for new or revised pretreatment standards for indirect dischargers, as well as new or revised new source performance standards. The Agency recognizes that section 304(m) does not require EPA to review and revise such standards or to promulgate such standards except for new source performance standards for industries not heretofore covered by them. Nevertheless, EPA in the past has generally proposed these standards for an industry category when guidelines for direct dischargers in that category were proposed. The Agency will continue to do this in the future, whenever appropriate. Therefore, today's plan covers pretreatment standards as well as guidelines for direct dischargers.

B. Ranking Process

In response to the provisions of section 304(m), the Agency utilized a ranking process to determine the priority for promulgating new and revising existing regulations. Ranking consists of comparing available quantitative and qualitative information on various industries and setting priorities for the development of new or revised guidelines. The available information has been compiled into Preliminary Data Summaries. A single ranking process considered all candidate industries whether for revision of existing regulations or for the development of new regulations.

1. Evaluation Criteria

In section VI of the August 25, 1988 notice (53 FR 32588), EPA proposed a set of criteria for deciding whether to initiate rulemaking to revise existing or develop new guidelines or standards. Based on the public comments, and the receipt and development of additional data since the proposal, the Agency has refined these criteria. Most of the criteria in today's notice either reflect the proposed criteria as originally described, or improve on the original description with more specific characterizations of the data items to be evaluated. (Three factors listed in the proposal have been dropped for purposes of priority-setting, although they are still important factors to be considered in the promulgation of technology-based guidelines).

The refined criteria reflect an emphasis on discharges of toxic and nonconventional pollutants and other indicators of possible environmental concern. The criteria provide the Agency with a means of ranking industries by considering the environmental risk of their wastewater discharges and the potential for their reduction, the utility of new or revised guidelines to permit authorities and POTWs, and the existence of statutory deadlines or court orders mandating that guidelines and standards be issued or revised for particular categories of dischargers. The criteria are groups of factors that the Agency has considered and weighed in setting rulemaking priorities. The criteria can not be applied mechanically. In applying the criteria and selecting categories of dischargers for the preparation of new or revised guidlines, the Agency has used considerable judgment grounded in its expertise in the regulation of the discharge of pollutants and the administration of the Clean Water Act and other authorities that address pollution of the nation's waters.

For purposes of clarity and simplicity the criteria are organized into three groups: Environmental Factors, Utility, and Legal Mandates for Specific Categories.

a. *Environmental Factors.* Environmental factors assess the importance of issuing new or revised guidelines for an industry based on factors that include data and information normally collected, analyzed and/or considered at some point in the development of most effluent guidelines. Nine criteria are employed to measure the extent to which the categories of dischargers being evaluated affect human health and the environment and present opportunities for environmental improvement through the issuance of new or revised guidelines. The nine criteria are:

—Total quantity of toxic and nonconventional pollutants discharged by the category,
—Quantity of toxic and nonconventional pollutants discharged per facility,
—Carcinogens present in discharges,
—Number of pollutants detected in discharges,
—Total priority pollutant pound-equivalents discharged,
—Number of discharging facilities,
—Opportunity for pollution prevention and control of cross-media pollution,
—Costs and economic impacts of controls, and
—Extent to which treatment in place effectively controls pollutant discharges.

Three criteria listed in the proposed notice, "Types of pollutants discharged and their significance to human health and the aquatic environment"; "Amounts of pollutants discharged to air and water and captured in sludge"; and "Number and location of dischargers" are now largely subsumed in six of the refined criteria. The *Total Quantity of Toxic and Nonconventional Pollutants Discharged* and *Number of Pollutants Detected in Discharge* are used by the Agency as indicators of the scope and magnitude of the discharges of toxic and nonconventional pollutants by facilities in the category and their effects on human health and the environment. The *Total Priority Pollutant Pounds-Equivalent Discharged* criterion (based on the 126 pollutants codified at 40 CFR part 423 appendix A, for which the Agency is required to test) is a calculation using the mass loading of a pollutant (measured in pounds), multiplied by a weighting factor for each pollutant based on toxicity. The individual values are then summed to provide the category value. This measure reflects in the aggregate the degree to which an industry effluent

could be injurious to aquatic life and human health. The *Number of Discharging Facilities* in the category indicates the approximate number of direct and indirect dischargers.

Two other criteria assess the potential impact of average facilities on the environment. Identification of *Quantity of Priority Pollutants Discharged per Facility* and the *Carcinogens Present in Discharges* provides an indication of the type, number and general toxicity of the pollutants present in the effluent of facilities that discharge into receiving waters or to publicly-owned treatment works.

"Location of dischargers," a criterion included in the proposal notice, is not included in the revised factors. Location of dischargers can be important in considering impacts on specific receiving waters. Location may also be of concern if, for example, a large industrial facility dominates the flow contributed to a POTW or if a cluster of multiple smaller facilities sends wastewater to a single POTW. In such circumstances, the discharges sent to one POTW might cause operating problems not encountered if the same wastewaters were dispersed among several POTWs. Before the Agency undertakes rulemaking for a category, however, data on the location of specific plants are not always sufficient for meaningful comparison of different categories of dischargers.

The "amount of pollutants discharged to air" or "captured in sludge" are also difficult to determine while making preliminary assessments of discharging industries. These two proposed criteria also have been deleted. The Agency has instead adopted another criterion, *Opportunity for Pollution Prevention and Control of Cross-Media Pollution.* This criterion measures the extent to which the preparation of new or revised guidelines for particular categories presents opportunities for significant reduction in pollutant generation and prevention of the simple transfer of pollution from one medium to another without effective treatment. The "Impact on air emissions" criterion is also subsumed in this new criterion.

Concerning the *Costs and Economic Impacts of Controls*, everything else being equal, new or revised guideline efforts would be addressed to those categories able to incur the high treatment costs generally associated with stringent regulations ahead of those categories in weaker financial condition (and thus less likely to be able to incur high treatment costs). These controls reflect treatment technologies that are available and appropriate for facilities in given industrial categories. This factor does not remove categories from consideration or listing, but helps to order the categories relative to each other. Impacts are estimated by some of the same factors currently used by the Agency (primarily plant closures and job losses) to determine the acceptability of compliance costs associated with effluent guideline and standard technology options. When useful data are available, this information is included in the data summaries for new candidate industries.

In addition, EPA has developed some preliminary estimates of cost-effectiveness for treatment technologies that may serve as the basis for pollutant limitations in the industries under review in today's notice. Cost-effectiveness compares the costs of treatment to the pollutant removals obtained. Along with the other economic information, the cost-effectiveness results help to set priorities for development of new and revision of existing regulations. Cost effectiveness estimates are not available for all of the categories addressed in this notice due to a lack of up-to-date treatment technology information and cost data for some of the categories. Where these data are available, cost effectiveness results are used in the ranking scheme.

The *Treatment-in-Place* criterion measures the extent to which existing pollution control practices in the industry effectively control the discharge of toxic and nonconventional pollutants in wastewater. This criterion is an indicator of the potential environmental benefits of new or revised guidelines for an industry. For example, if the majority of facilities in an industry category have well-operated advanced treatment systems in place, the incremental benefit of new or revised guidelines may be small. Conversely, an absence of effective treatment will indicate a high degree of benefit. In the former case, the criterion would be assigned a low value; in the latter case, a high value is assigned.

The Agency has deleted "Volume of wastewater per facility" (also known as "wastewater flow") as an independent criterion. By itself, flow is not a useful indicator of the presence or quantity of toxic and nonconventional pollutant discharges. The volume of wastewater discharged per facility has been used, however, in combination with data on concentrations of toxic and nonconventional pollutants, to determine the mass of pollutants discharged by the ranked industries, supporting the estimates for "Total quantity of toxic and nonconventional pollutants discharged by the category," the "Quantity of toxic and nonconventional pollutants discharged per facility" and the "Total priority pollutant pound-equivalents discharged."

Finally, "Treatability of pollutants discharged" also has been deleted as an independent criterion. This criterion, as proposed, referred to an estimate of the level of performance of the control technologies or other methods that might be employed to reduce the discharge of pollutants by a category of dischargers. These considerations are important in setting technology-based effluent guidelines. However, while the Agency frequently is aware of some technologies and process and materials changes that will reduce discharges by an industry category, the level of performance of these control methods generally is not known when the Agency prepares preliminary studies of industries for the purpose of setting rulemaking priorities. Detailed study, including literature review and industry surveys, is necessary to identify the full range of pollutant control technologies applicable to an industry. This must be followed by analytical work to determine the actual performance levels that can be achieved. Therefore, the concept of treatability is considered in general terms in the "Cost and Economic Impacts of Controls" criterion, which is based on treatment technologies that might be applied to the various categories.

b. *Utility.* The second major factor used in the process to evaluate and rank industries was *Utility*. Utility indicates the relative importance of new or revised guidelines for the purposes of issuing NPDES permits (for direct dischargers) and supplementing pretreatment local limits (for indirect dischargers). In the absence of national guidelines, facilities that discharge to surface waters are subject to NPDES permits that include technology-based limits based on best professional judgment (BPJ). These BPJ limits take into account the same considerations that are used to establish effluent guidelines. Similarly, indirect dischargers to POTWs are subject to local limit requirements established by the POTW authorities. Thus, industrial dischargers may be effectively regulated even without national effluent guidelines and pretreatment standards, especially if the wastestreams are relatively simple—i.e., the number of pollutants is small and/or the pollutants present are well characterized in terms of treatability.

Developing permits for complex facilities (i.e., those with many wastestreams and/or large numbers of

pollutants, which may exhibit treatability characteristics that are poorly documented) in typically time-consuming and difficult. Similar difficulties may be encountered by POTWs in developing local pretreatment limits for industrial users not covered by categorical standards. The availability of effluent guidelines and categorical pretreatment standards for such industries allows for more efficient regulation by EPA, State agencies, and POTWs.

EPA headquarters relies upon information from its regional offices, States, municipalities, public interest groups and citizens to identify industry categories for which national regulations provide specific benefit to NPDES permit writers and POTW authorities. A recent submission which indicates the need for and utility of regulations for specific industries was provided by the Association of Metropolitan Sewerage Agenices (AMSA). The letter from AMSA is included in the record for today's notice.

c. *Legal Mandates for Specific Categories.* Statutory requirements, court orders or settlement agreements that require promulgation of effluent guidelines and standards for specific industries also have been taken into account in developing today's rulemaking priorities.

The Agency is currently under a specific statutory mandate to promulgate guidelines for the Pesticide Chemicals category, and is a party to settlement agreements setting schedules for the issuance of guidelines in the Pulp, Paper, and Paperboard category and the Offshore subcategory of the Oil and Gas Extraction Category. These "committed" projects were ranked using the system described in this notice, but for all intents and purposes, were treated as mandatory activities. EPA has already invested considerable time and resources developing regulations for the projects in this group.

2. Agency Data Requirements for Setting Rulemaking Priorities; Preliminary Data Summaries

As discussed in section IV of the proposal notice (53 FR 32585–7), the Agency is currently gathering data on several industries for preliminary studies and rulemaking projects. The Agency uses all available information and data for the purpose of setting rulemaking priorities. For example, in the preliminary study of an industry, the Agency will rely on selective on-site wastewater sampling, data from NPDES and other regulatory programs (from within EPA and from other Federal and State agencies), data provided by industry associations and individual companies, and other sources such as research studies, professional journals and other literature. EPA generally will not administer a full-scale questionnaire survey or a comprehensive sampling and analysis program (as it would when obtaining information for full-scale rulemaking) because of the time and expense involved.

The purpose of a preliminary industry study is to indicate whether and to what extent an industry discharges toxic and nonconventional pollutants, and to provide a basis for comparison with other industries for purposes of assigning priorities for regulation. This objective can be met by combining the findings of selected on-site sampling with other descriptive information about the industry to form a profile for ranking. This compilation comprises the "Preliminary Data Summary."

The Preliminary Data Summary presents a synopsis of recent technical and economic information on a category of dischargers for use by EPA staff and management. The documents are not used directly as a basis for rulemaking, but are intended for use in the Agency's determination of which categories most require preparation of new or revised effluent guidelines, and form one major basis for the selection process that culminated in today's biennial plan. (They also may be expanded to become guidance documents for NPDES permit writers and POTWs.)

Preliminary Data Summaries are prepared after the Agency acquires new data and/or brings together previous data on an industry. The documents typically describe:

—The products manufactured and/or services provided by the industry;
—Number, types and geographic location of facilities;
—Destination of discharges (directly to surface waters, indirectly to publicly-owned treatment works, or both);
—Characterization of the wastewater discharges and identification of pollutants present in the wastestreams (e.g., mean concentrations of pollutants, wastewater volumes, mass loadings);
—Sampling and analytical methods employed to ascertain the presence and concentration of pollutants in the wastewater;
—Pollution control technologies in use and potentially applicable to the industry;
—Non-water quality environmental impacts associated with wastewater treatment in the industry (e.g., air emissions, wastewater treatment sludges, and other wastes including hazardous wastes);
—Cost of control technologies in place and cost estimates for additional controls;
—Estimates of water quality impacts of discharges within the subject industry;
—Economic assessment (current financial condition of firms in the industry, industry expansion or reduction trends, size characterization of firms, impact of estimated treatment costs on representative facilities, estimated cost-effectiveness of additional wastewater treatment technologies).

The type and quality of information varies among the preliminary data summaries, depending on the data available to the Agency when each document is prepared. For example, some of the current summaries have excellent information on the number and location of the discharging facilities while others contain estimates drawn from secondary data sources. However, the summaries represent the Agency's best characterization of industries at the time the summaries are compiled. As additional data are acquired, they will be factored into the ranking process. Consequently, the Preliminary Data Summaries are also subject to revision. The Agency will make the summaries available to the public.

3. Data Sources

In addition to data specifically acquired by the Agency for the purpose of assisting in priority selection, the Agency has examined several groups of existing sources of information for setting rulemaking priorities. Most, but not all, of these sources were used to support the plan in today's notice. Of these sources the Domestic Sewage Study (DSS) was relied on most extensively because it focused on wastewater from indirect dischargers and provides pollutant loading information that is comparable across a number of industries. Most of the sources described herein were designed for purposes other than setting effluent guidelines priorities, and the Agency has attempted to extract relevant data to make its comparisons. They are summarized as follows.

a. *Domestic Sewage Study and Follow-Up Activities.* EPA prepared the DSS pursuant to section 3018(a) of the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6939). The Study describes the impact of RCRA hazardous wastes discharged to POTWs. The Agency examined the nature and sources of hazardous wastes discharged to POTWs; evaluated the effectiveness of EPA programs in dealing with such discharges; and recommended ways to improve the programs to achieve better control of hazardous wastes entering POTWs. One of the specific recommendations of the Study was that EPA evaluate several industrial categories to determine

whether new or revised categorical pretreatment standards should be promulgated.

Although the DSS dealt primarily with indirect dischargers, the findings are useful in evaluating direct dischargers because direct and indirect dischargers in a given industry do not differ significantly in the kinds of toxic or hazardous pollutants found in their wastewater. Similarly, although the Study focused on hazardous constituents defined in the RCRA program, these constituents include all toxic and many nonconventional pollutants regulated under the CWA.

The Agency has collected additional information on some of the DSS industries since publication of the 1986 report. This has consisted of reviewing the production processes and wastewater treatment systems in several industries, and analyzing a small number of wastewater samples from several plants in the categories. Samples were analyzed for a list of approximately 450 pollutants, comprised mainly of RCRA hazardous constituents and CWA priority pollutants. While the data do not provide a complete statistical profile of industry wastewater, they do indicate the number of pollutants found in the discharges and the range in the concentrations for those pollutants.

b. *Data from Other Programs and Technical Studies.* EPA has used and will continue to examine and use where appropriate other information sources to identify and evaluate potential candidates for new or revised effluent guidelines and standards. The Agency does not intend to use such data directly for rulemaking until further verification and evaluation of the validity and reliability of the information are made.

The *Toxic Release Inventory (TRI)* is an Agency program mandated by section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. 11023), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA). It is one source of information the Agency now has available to identify facilities that may discharge toxic chemicals to surface waters, or transfer them to POTWs. Information for the TRI is reported by a facility if it meets specified criteria on the size and type of facility and on amount and uses of TRI-listed chemicals. A facility must report if it meets all of the following criteria: it is a manufacturing facility; it employs ten or more people; and it manufactures, imports, processes or uses TRI listed chemicals above specified threshold amounts. The TRI reports amounts of 307 different toxic chemicals and 20 broadly-defined chemical categories—which can include many individual chemicals—released by facilities directly to the environment or transported to off-site locations. For 1987, the first year of TRI reporting coverage, facilities were required to report to EPA by July 1, 1988. These data are now available for review and use by the Agency in determining areas which may require further study or data acquisition.

TRI data, while a valuable indicator of possible environmental concern, are limited in their usefulness for effluent guidelines planning. The data do not directly gauge the extent to which humans or the environment are exposed or at risk. Moreover, the data do not provide comprehensive release data for industry because the reporting thresholds exempt some facilities. The accuracy of the industry totals is also limited because the individual facility reports are based on estimates submitted by the respondents.

National Dioxin Study. EPA conducted a two-year nationwide study to investigate the extent of dioxin [primarily 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)] contamination in the environment. The Agency examined sites involved in the production or disposal of 2,4,5-trichlorophenol (2,4,5-TCP) and related pesticide chemicals, and other sites where dioxin formation may have occurred. (2,3,7,8-TCDD is a trace byproduct of the process used to manufacture these pesticides.) While contamination was found, as expected, at many sites involved in production of the pesticide chemicals, a previously unsuspected source of dioxin contamination was found in discharges from pulp and paper mills that use chlorine to bleach pulp. This finding prompted the Agency to conduct additional studies targeted at pulp and paper mill discharges.

Small Quantity Generators Study. In 1983 and 1984, EPA conducted a survey of generators of hazardous waste who produce less than 1,000 kilograms of hazardous waste per month. While the focus of the survey was on methods for disposal of hazardous waste, some information on discharge of liquid hazardous wastes to POTWs was compiled. The study did not assess quantitative data on pollutant characterization. The final report was published in February 1985.

Oil and Gas Wastes Study. EPA conducted a study of wastes associated with the exploration, development or production of crude oil or natural gas pursuant to section 8002(m) of the 1980 amendments to RCRA. The study addressed, among other aspects, drilling fluids, produced waters and other wastes associated with oil and gas operations.

The study developed information related to the sources of wastes and amounts of waste generated, present disposal practices and their related potential danger to human health and the environment, and alternatives to the current disposal methods and the cost and impact of these alternatives on the oil and gas industry. EPA has used data from this study to develop pollutant loading estimates for some of these wastes, and will continue to utilize the study results in rulemaking efforts for the Oil and Gas category.

National Bioaccumulation Study. Bioaccumulation is the uptake and retention of chemicals present in the environment by plants and animals. Aquatic organisms such as fish are exposed to certain chemicals through ingestion of food and by absorption from water.

The National Bioaccumulation Study, which EPA began in 1986 as a follow-up to the National Dioxin Study, has the objective of identifying toxic pollutants bioaccumulating in fish to levels causing significant human health risks through consumption, together with some indication of the possible sources of the pollutants.

EPA expects to publish the study in the Spring of 1990. Data from the study will aid in planning rulemaking efforts. It is important to recognize that the Bioaccumulation Study is a screening study.

Pretreatment Effectiveness Study. Section 519 of the Water Quality Act requires EPA to prepare a report to Congress which assesses the effectiveness of the pretreatment program in meeting the goals of the Clean Water Act. The Office of Water has begun a major study to meet the requirements of section 519. The study will assess the adequacy of data on environmental impacts; evaluate the extent to which secondary treatment at POTWs effectively removes toxic pollutants; and evaluate the capability of POTWs to revise pretreatment standards and set more stringent local limits. Finally, the study will evaluate alternatives for improving the overall effectiveness of the national pretreatment program. The findings of the study may identify industrial categories requiring additional national controls.

Pollution Prevention Studies. EPA has established a special program to develop activities, such as source reduction and recycling, to prevent or reduce the generation of pollutants and

their distribution in the environment. "Pollution Prevention" strategies are being supported by the EPA program offices and operate under the general management of EPA's Office of Pollution Prevention and Planning. These activities are expected to identify industrial categories where substantial reductions in pollutant discharge can be obtained.

International Sources. Information from foreign governments and industries made available to the Agency also assists in selecting regulatory priorities. One recent example is monitoring information made available by the Ontario Ministry of the Environment indicating the presence of dioxins and furans in certain wastestreams in the petroleum refining industry. Responding to this information, EPA is currently sampling similar wastestreams at refineries in the United States to help evaluate the human health and environmental problem and the need for regulation.

Another example of foreign cooperation on environmental issues deals with chlorinated organic compounds in pulp and paper mill wastewaters. The Sweden Environmental Protection Board (EPB) Environmental Cellulose Project has documented biological effects of pulp and paper mill wastes on several Baltic Sea species. A communiqué from the EPB indicates that the Swedish Pulp and Paper Research Institute has positively identified 315 individual compounds in wastestreams from pulp bleaching operations and whole mill effluent. Information prepared for the Ontario Ministry of the Environment includes data on approximately 200 organic compounds detected in various wastestreams at various pulp and paper mills.

c. *Consultation between EPA Offices and with States and POTWs.* The experience of people who implement the Agency's water pollution control programs is an important source of information relevant to setting regulatory priorities. State permit authorities, as well as EPA regional offices, are responsible for translating effluent guidelines into limits in NPDES permits issued to individual dischargers, and for enforcing these limits. POTWs share responsibility for implementing categorical pretreatment standards, and set local limits. These authorities have a good working knowledge of the existing guidelines and standards, of technological and economic factors that affect limits, and of industrial categories for which new or better limits are needed.

EPA routinely meets with States and POTWs in several contexts. These include informal discussions, technical workshops, development of program guidance, and development of technical assistance and field support for permit writers and municipal operators of POTW pretreatment programs. While these meetings are held to enhance the ability and capacity of permit writers and municipal authorities, they also provide information to assist in the selection of particular industries as potential candidates for new or revised guidelines and standards because of identified problems. Since proposal, EPA has revised the criteria for industry evaluation and selection to take increased account of the expertise and needs of State and local permit writers and POTWs through inclusion of the Utility factor described in section V.B.1 of this notice.

In addition to exchanges of information in the formats described above, one POTW submitted written comments on the Agency's notice of proposed plans. These comments are included in the record for today's notice.

d. *Review of Variance Requests and Petitions.* Requests by industrial dischargers for variances under sections 301 (c), (g) and (n) of the CWA are a less reliable source of information about industry categories that may need review or revision, but such requests can disclose technical information indicating that a guideline should be reviewed. These requests are specific to individual facilities and frequently focus on only one or a few pollutants or wastestreams. As a consequence, they tend not to provide comprehensive information with which to address the need to issue new or revised guidelines for entire categories of dischargers. Variance requests also tend to be submitted soon after the promulgation of regulations; in these cases, it is unlikely that EPA will initiate immediate efforts to broadly revise regulations for the category.

Similarly, citizen petitions concerning particular industries and pollutants may contain data indicating that a guideline should be reviewed. More typically, however, such petitions include little or no data, or may include data specific to one or a few industrial facilities. In these cases, they serve to stimulate action on EPA's part, but are rarely sufficient in themselves to allow analysis of the need for category-wide regulatory efforts. (EPA's ensuing action would typically be a review of facility permits or POTW local limits for possible revisions, followed by broader data gathering if the Agency finds that the reported problems occur throughout an industry category.)

e. *Review of Public Comments and Citizen Reports.* The Agency received comments from the public on the August 25, 1988 proposal. EPA carefully considered the comments before issuing today's notice (see section VIII). EPA expects to receive further public comments on future section 304(m) notices. The Agency will consider all such comments in its efforts to identify and assess the need for regulations for industrial categories.

Citizen reports about industrial dischargers typically are directed toward a specific discharging facility, and as such they are usually referred to the responsible State enforcement agency or EPA regional office. As is the case with citizen petitions, such reports usually describe plant-specific circumstances rather than industry-wide trends.

C. Application of Criteria

This section of the notice describes how the evaluation criteria discussed in section V.B.1 of today's notice (i.e., Environmental Factors, Utility and Legal Mandates) have been applied to develop the industry category rankings used to select the categories in the current biennial plan for which EPA will prepare new or revised guidelines and standards. The industries listed and ranked in today's notice are those for which the Agency judged to had sufficient data. The Agency stresses that the industry rankings are relative to each other; they are not being compared to other categories for which sufficient data are not yet available to engage in comparative ranking. As EPA gathers data on additional industries, it will rank them and include them in subsequent notices.

In the ranking process contained in the proposal notice, EPA has attempted to use quantitative information wherever possible. Given that quantitative data are not available for all of the evaluation factors, both quantitative and qualitative information are used. In considering the information and the various factors, EPA has applied considerable judgment as to which are of greater and lesser importance.

1. Environmental Factors

The most important environmental factors in ranking the industries concerned are the discharges of toxic and nonconventional pollutants. The Agency has found it difficult to estimate the relative importance of an industry without pollutant loading information, and generally defers the ranking of an

industry until such data become available. In ranking the industries listed in today's notice, the Agency gave special emphasis to pollutant loading data. Although the 126 priority pollutants do not comprise the full range of toxic and nonconventional pollutants that may be present in wastewater, the Agency has priority pollutant data for most of the industries it considered, and is using the data as an indicator for a fuller scope of pollutants. In addition, the Agency has information on a wider range of pollutants (approximately 450) in the DSS industries, and has used this information in ranking. This allows EPA to be responsive to the intent of section 304(m) to address toxic and nonconventional pollutants. Where pollutant data were not available or comparable, the Agency has examined other known characteristics of industries to make an estimate of the relative environmental impact of their wastewater discharges.

The evaluation is based largely on data and information contained in the Preliminary Data Summaries, supplemented by the judgment of Agency staff. The summary ratings for the industry categories are shown in Table 1. (A synopsis of the ratings for all three factors appears in section V.C.4.)

2. Utility

The category ratings for Utility, which refers to the importance and usefulness of new or revised national guidelines and standards to permit authorities and pretreatment progam operators, are assigned based on the knowledge and judgment of Agency staff and upon information provided by the States and others. Section V.B.3.c of today's notice described the extensive continuing communication between agency staff, State permit writers and local POTW operators. These contacts provide information identifying the industries for which permit writers and POTWs believe national effluent limitations guidelines and pretreatment standards will be most useful to them. The information provided through these contacts is included in the public record for this notice.

The utility values assigned to the industry categories considered for this notice are presented in Table 1.

3. Legal Mandates for Specific Categories

The third overall assessment factor used in the Agency's ranking system is Legal Mandate for Specific Categories ("Mandate.") If there is a statutory provision or judicial order concerning the development of guidelines for a specific category, this is indicated in the following Table by a "Yes." If there is no statutory or judicial order that the Agency develop guidelines for a specific category of dischargers, this is indicated by a "No."

TABLE 1.—RANKING OF PRIORITY INDUSTRIES

Category	Environmental factors	Utility	Legal mandates
1. Pesticide chemicals [1]	High	High	Yes
2. Pulp, paper, and paperboard [1]	High	High	Yes
3. Pharmaceutical manufacturing	High	High	No
4. Hazardous waste treatment	High	High	No
5. Machinery manufacturing and rebuidling	High	Medium	No
6. Coastal oil and gas	Medium	High	No
7. Offshore oil and gas [1]	Medium	Low	Yes
8. Transportation equipment cleaning	High	Medium	No
9. Industrial laundries	Medium	Medium	No
10. Stripper oil and gas	Low	High	No
11. Used oil reclamation and re-refining	Medium	Low	No
12. Drum reconditioning	Low	Medium	No
13. Solvent recycling	Low	Medium	No
14. Hospitals	Low	Low	No
15. Paint formulating	Low	Low	No

NOTE: Industries are ranked only in relation to each other.
[1] Indicates committed rulemaking project (see discussion in Section V.B.1.c of today's notice).

4. Industry-by-Industry Evaluations

Pesticide Chemicals (40 CFR part 455). This category includes facilities that manufacture, formulate or package pesticide chemicals. Currently valid regulation covering the Pesticide Chemicals category set BPT limitations only. In 1986, a final regulations establishing BAT guidelines, NSPS, PSNS and PSES was withdrawn after challenge by industry in the U.S. Court of Appeals for the Eight Circuit. (EPA determined that there were errors in the database used to derive the numerical limitations in the rule and therefore requested remand of the rule for reconsideration by the Agency.) Since the remand, the Agency has been preparing proposed rules establishing BAT, NSPS, PSNS and PSES. The Agency is under both statutory and judicial mandates to develop guidelines covering this category. Section 301(f) of the Water Quality Act of 1987 (101 Stat. 30) required that BAT guidelines be promulgated for this category by December 31, 1986. The Pesticide Chemicals category also is addressed in the 1976 consent decree. Thus, the *Mandate* factor is applicable.

The Pesticide Chemicals category also rates High for *Environmental Factors*. The industry is composed of 92 manufacturing facilities and over 3,000 formulating/packaging facilities. These facilities discharge significant amounts of highly toxic pollutants. The Agency estimates that discharges from these facilities are in the range of 175 million to almost 1 billion pound-equivalents per year.

Finally, the Pesticide Chemicals category rates High for *Utility*. Facilities in this category handle a wide variety of pollutants. The pollutant mix changes seasonally, according to the industry's manufacturing cycle. This complex and variable pollutant mix greatly complicates NPDES permit issuance and the establishment of pretreatment limits in the absence of national standards. Thus the Agency believes that guidelines and standards will be of great value to permit writers and POTWs. In addition, as part of the Pesticide Chemicals rulemaking, the Agency is developing several new methods to detect and measure pollutants discharged by Pesticide Chemicals facilities. These analytical methods will be available for use to control pesticide

active ingredients in other regulatory contexts, such as regulations governing drinking water protection and hazardous waste management. The methods also will be useful in assessing the impacts of pesticide use on ambient water quality.

Pharmaceutical Manufacturing (40 CFR part 439). The Agency has already promulgated BAT guidelines and new source performance standards covering the Pharmaceutical Manufacturing category. The Pharmaceutical Manufacturing industry is rated High for *Environmental Factors*. This category was identified in the DSS as a major discharger of hazardous pollutants. Even though guidelines are in place, the Agency estimates that the Pharmaceutical Manufacturing category discharges about 2.1 million pounds per year of total priority volatile organics and about 6 times that quantity of non-priority volatile pollutants. A large portion of the pollutant loadings are comprised of volatile organic chemicals (VOCs), such as solvents. Some of the VOCs are suspected human carcinogens. Many pharmaceutical plants that are indirect dischargers have little or no treatment in place. Thus these organic compounds are not being adequately controlled by many plants. This has resulted in operating problems, including upsets, for some POTWs. The Agency believes that the presence of VOCs in wastewater from facilities in the Pharmaceutical Manufacturing category presents a significant opportunity for control of cross-media pollution, because VOCs discharged in wastewater can volatilize into the air. Many VOCs undergo chemical transformation in the air and contribute to the formation of ozone in the lower atmosphere. Many urban areas are in serious violation of national ambient air quality standards for ozone, adversely affecting the health of millions of Americans and causing significant property damage. VOCs also contribute to the destruction of the tropospheric, protective ozone layer which protects the Earth's surface from harmful ultraviolet radiation.

With respect to *Utility*, dischargers in this category typically manufacture a large variety of products at different times, causing the resulting wastewater to contain a complex and varying mix of pollutants. As in the Pesticide Chemicals category, the absence of a national guideline in this situation complicates the regulatory task facing permit writers and POTWs. All six EPA regions that include most Pharmaceutical Manufacturing facilities recommended this category for priority in the development of guidelines.

Hazardous Waste Treatment. This category consists of three groups of facilities: a. Facilities that treat aqueous hazardous waste; b. Hazardous waste incinerators with wet scrubbers; and c. Municipal and hazardous waste landfills with leachate collection. These facilities were identified in the DSS as potentially contributing large amounts of hazardous wastes to POTWs. The Agency has not previously published guidelines specifically covering the Hazardous Waste Treatment (HWT) category. (The Agency has published guidelines for a number of industry categories that in practice send their discharges to Hazardous Waste Treaters for treatment. See 51 FR 21541, 21547, June 12, 1986.)

The Hazardous Waste Treatment category rated high for *Environmental Factors*. EPA estimates that the three groups of facilities comprising this category generate 20 million pounds of priority pollutants in raw wastewaters annually, and perhaps as much as 5 times that amount in non-priority hazardous and toxic pollutants. For example, leachates from municipal and hazardous waste landfills were found to contain high concentrations of toxic organic, metal, conventional and nonconventional pollutants. Some volatile and extractable toxic organic compounds were found in untreated leachate in the range of 1 to 10 milligrams per liter (mg/l), with a few at greater than 100 mg/l. Scrubber water from hazardous waste incinerators is known to contain high concentrations of metals. Thus the total quantity of toxic and nonconventional pollutants discharged by HWT facilities is relatively high. The aqueous hazardous waste treatment facilities (Group a) discharge the largest amount of pollutants of the three groups within the category.

The number of pollutants detected in the discharge of HWT facilities also is high. Commercial aqueous hazardous waste treatment facilities receive many types of wastes, including inorganic and organic process wastewaters, oily wastes and tank washings, off-specification chemicals, landfill leachates, spent solvents, incinerator scrubber wastewaters, and brines and miscellaneous acids and caustics. Wastewaters from aqueous HWT facilities vary widely, but typically contain high concentrations of toxic organic, metal, conventional and nonconventional pollutants. Treated effluents from aqueous hazardous waste treatment facilities sampled by the Agency contained high concentrations of conventional and nonconventional pollutants, as well as a few metals and organic compounds. These pollutant concentrations were observed despite the fact that the facilities sampled were using advanced wastewater treatment processes (e.g., multi-media filtration and granular activated carbon columns). Thus, treatment in place is relatively ineffective in controlling pollutants of concern. In addition, many of the pollutants discharged by HWT facilities are carcinogens.

The available data on the industry also resulted in a High rating for *Utility*. As noted above, the wastestreams from HWT facilities are complex in terms of the number and variety of pollutants present. Six EPA regional offices and many POTWs that receive HWT wastes recommended the HWT category—particularly aqueous treatment facilities—for priority in the development of guidelines.

Pulp, Paper, and Paperboard (40 CFR parts 430 and 431). The Agency has previously promulgated BPT, BCT and BAT guidelines, PSNS, PSES and NSPS covering the Pulp, Paper and Paperboard category. Since promulgation, however, results from the National Dioxin Study and the National Bioaccumulation Study (described in section V.B.3 of today's notice) have raised concerns about the presence of dioxins, furans and other toxic organic compounds in discharges from dischargers in the Pulp, Paper and Paperboard category.

This category is covered by a consent decree in *Environmental Defense Fund v. Thomas* (D.D.C. No. 85-0973) that calls for EPA to set a schedule for issuance of a proposal to incorporate dioxin limitations into the effluent guidelines for this industry (absent a determination by EPA not to pursue such regulations). Thus, the *Mandate* factor is applicable.

This industry is rated High for *Environmental Factors* as a result of the presence of dioxins and furans and other toxic organic compounds in industry wastestreams as described above. Dioxins, furans and other chlorinated organic compounds are known to be carcinogenic, bioaccumulative and persistent. The development of guidelines addressing these pollutants ranks High for *Utility*, even though much is already known about the wastestreams and treatment process effectiveness. This is because some control methods addressing dioxins, furans and other chlorinated organic compounds are known, but their effectiveness is not well defined. This

greatly complicates development of BPJ permits.

Machinery Manufacturing and Rebuilding. This category, broadly defined, covers facilities that perform wastewater-generating processes on metal machinery and equipment, including manufacture and assembly, rebuilding, repair and maintenance. The Agency has not previously published guidelines covering the Machinery Manufacturing and Rebuilding ("MM&R") category.

The MM&R category includes 15 major industrial groups that might appropriately be covered by separate effluent guidelines. These major groups are:

—Motor Vehicles (i.e., Automobiles);
—Bus and Truck;
—Aircraft;
—Aerospace Vehicles;
—Railroad;
—Ships and Boats;
—Office Machines;
—Hardware (Machine Tools, Screw Machines, Metal Forging and Stamping, Metal Springs, Heating Equipment, Fabricated Structural Metal);
—Ordnance;
—Stationary Industrial Equipment (including Electrical Equipment);
—Mobile Industrial Equipment;
—Household Equipment;
—Electronic Equipment (including Communication Equipment);
—Instruments (Measurement and Control Instruments, and Specialty Equipment); and
—Precious and Nonprecious Metals.

In sum, there are approximately 970,000 facilities covered by these designations. The majority of these facilities (692,000 or 71 percent of the total) are small businesses with fewer than 10 employees; 278,000 (29 percent) of the MM&R facilities have more than 9 employees.

Developing a single set of guidelines and standards to cover these facilities appears to be infeasible given the great diversity of the facilities. EPA intends at this time, therefore, to develop guidelines covering 7 of the 15 groups of facilities. These seven groups, which could be treated as separate subcategories within one industrial category, are Aircraft, Aerospace, Hardware, Ordnance, Stationary Industrial Equipment, Mobile Industrial Equipment, and Electronic Equipment. These seven groups were selected based on an analysis (found in the record for today's notice) that was similar to that employed to set overall priorities for the development of new and revised guidelines under section 304(m). The analysis focused especially on the amounts and kinds of wastewater discharges created by the different groups of dischargers, the likely economic impacts of stringent regulations, and the extent to which facilities in the different groups of dischargers are not currently affected by existing guidelines and standards. (Many MM&R facilities are subject to BPJ permits that were based in whole or in part on previously promulgated guidelines and standards, e.g., Electroplating, Nonferrous Metals Forming, and Metal Molding and Casting (Foundries). The data collected in developing these guidelines and standards and the promulgated limits provide a basis for the BPJ determination.) In preparing the next biennial plan under section 304(m), the Agency will address the other eight major groups of MM&R dischargers as candidates for the development of new guidelines and standards.

The 7 groups of dischargers for which EPA will develop guidelines represent about 195,000 facilities or 20 percent of all MM&R facilities. However, they account for about 52 percent of the total estimated discharges of toxic and nonconventional pollutants from the MM&R category. Almost one-half (48 percent) of the facilities have ten or more employees.

The 7 MM&R groups together are rated High for *Environmental Factors.* The DDS showed that facilities in the Machinery Manufacturing and Rebuilding category, as a group, are the largest contributor of toxic organic pollutants to POTWs. Subsequent studies confirm that these facilities are major generators of both organic and toxic metal pollutants. EPA estimates that the pollutant loadings from the 7 groups approximate 32 billion pounds annually. Current data indicate that about 10 percent of the facilities are direct dischargers and 70 percent discharge to POTWs. (The remaining 20 percent do not discharge wastewater.)

While this category contains a large number of facilities, a Medium rating for *Utility* (rather than a High rating) is appropriate because many of the direct discharging facilities in this category are covered by BPJ permits based on guidelines promulgated for other categories.

Coastal Oil and Gas Extraction. Coastal oil and gas extraction is a subcategory of the Oil and Gas Extraction Point Source Category (40 CFR part 435, subpart D). Existing guidelines are at the BPT level of control. Coastal facilities are defined as those engaged in production, field exploration, drilling, well completion and well treatment in coastal areas, *i.e.*, areas located in any body of water landward of the territorial seas or in any adjacement wetlands [40 CFR 435.40; 435.41(e)].

The coastal subcategory ranks Medium for *Environmental Factors.* The wastestreams generated by coastal drilling and production operations (drilling fluids, drill cuttings and produced water and others) contain a variety of toxic and nonconventional pollutants. The Agency estimates that coastal facilities discharge an estimated 4.2 million pounds per year of priority organic and inorganic pollutants in the produced water wastestream and an estimated 12.9 million pounds per year of priority and other organics and metals in the drilling fluids and drill cuttings wastestreams. In many cases, the discharges enter especially sensitive and valuable water environments. Coastal facilities lack adequate treatment in place to control the toxic and nonconventional pollutants in the discharges. A high rating was not deemed appropriate because the quantity of toxic and nonconventional pollutants discharged by individual facilities can be relatively low and because BPT controls on "oil and grease" (a listed conventional pollutant) effect removal of some of the toxic pollutants.

The coastal subcategory is rated High for *Utility* because coastal facilities are numerous, presenting a difficult permit-issuance task. Available data suggest there are 30,000 coastal wells, most of which are subject only to BPT requirements. Even before promulgation of guidelines, the technical studies that would be performed during the rulemaking—for example, waste characterization and assessment of available treatment technologies—would be of great value in writing permits to control the discharge of toxic and nonconventional pollutants by this populous subcategory. In addition, many of the technical studies performed as part of the Offshore rulemaking can be used to develop coastal guidelines. Thus the development of coastal guidelines will be relatively efficient because it can "piggyback" on the Agency's ongoing development of guidelines covering the Offshore subcategory.

Offshore Oil and Gas Extraction. Offshore Oil and Gas Extraction is also a subcategory of the Oil and Gas Extraction Category. The Offshore subcategory includes facilities located seaward of the inner boundary of the territorial seas. (See 40 CFR 435.10.) Existing guidelines are at the BPT level of control. EPA is developing new source performance standards for the Offshore subcategory as a result of a settlement agreement filed on July 9,

1980 in *NRDC* v. *Thomas* (D.D.C. No. 79-3442). On August 26, 1985, EPA proposed BAT, BCT and NSPS covering certain waste streams discharged from facilities in the offshore subcategory. NRDC has filed a motion to reopen *NRDC* v. *Thomas* to amend the complaint, seeking a new judicial schedule for that includes BAT and BCT guidelines as well as NSPS. Thus the *Mandate* factor applies. The Agency has been engaged in the preparation of BAT and BCT guidelines and new source performance standards covering the offshore subcategory for seveal years.

The Offshore subcategory ranks Medium for *Environmental Factors*. Pollutant loadings for each facility are in a range similar to that of coastal facilities. There are fewer offshore facilities, however (about 4,300 platforms); all of them have some level of treatment in place, and many are covered by NPDES general permits, which allow efficient administration EPA regional offices. These facts support the Agency's Low rating for *Utility*.

Transportation Equipment Cleaning. The Transportation Equipment Cleaning industry performs cleaning services on transportation equipment such as tank trucks, railroad tank cars, tank barges, and aircraft exteriors. Facilities that fit within this category are often part of other indusrial enterprises. A large percentage of these facilities are indirect dischargers or they combine their wastewater with that of other facilities prior to treatment. Currently no national guidelines apply to this category.

For the purposes of this notice, EPA has rated the Transportation Equipment Cleaning category High for *Environmental Factors*. Based on limited sampling data, the priority and nonconventional pollutant loadings for this category are estimated to be in the range of 51 million pounds annually. The Agency found high levels of conventional, toxic, and nonconventional pollutants in raw and treated wastewaters being discharged at several facilities that were sampled for the DSS. These pollutants often are derived from small residual quantities ("heels") of pure chemical products which remain in tanks that are cleaned at the facilities. Some of these chemical products (inorganic and organic acids and caustics, petroleum products, and other bulk products) are hazardous materials. Moreover, these tanks typically are cleaned with highly caustic solutions. Many facilities lack any treatment in place. The Agency has estimated that there are about 700 facilities devoted to the cleaning of tank trucks, rail tank cars, and tank barges. There are estimated to be 1,400 facilities the clean commercial aircraft exteriors.

Transportation Equipment Cleaning facilities and the wastewater that they discharge are relatively difficult to characterize for regulatory purposes due to the diversity of their operations. This difficulty has resulted in a high rating for Environmental Factors, based on current data. However, the Agency believes that the limited data presented in the Preliminary Data Summary may not be representative of the industry as a whole, because EPA's findings on tank barge discharges were higher than the expected industry average. (By comparison, sampling of tank truck and tank car facilities indicated lower levels of pollutants.) The Agency believes that further study would lead to Medium Environmental rating, in comparison to the other industries discussed in today's notice.

Compared to many of the other categories assessed by EPA, Transportation Equipment Cleaning is not large in terms of the number of dischargers (about 2,100). However, the difficulty of characterizing the discharges, in addition to the variable nature of the discharges (*i.e.*, types of pollutants, concentrations, wastewater flows) complicates the development of NPDES permits and POTW local limits and explains the Medium rating for *Utility*.

Industrial Laundries. Industrial laundries supply laundered and dry-cleaned work uniforms, wiping towels, safety equipment (such as gloves and flame-resistant clothing), dust covers and cloths, and similar items to industrial and commercial users. Currently no national guidelines apply to this category.

The Industrial Laundries categories rates Medium for *Environmental Factors*. Approximately 1,000 facilities, virtually all of them indirect dischargers, accept items for laundering which contain a wide range of toxic and nonconventional pollutants. EPA has estimated the priority and nonconventional pollutant loadings from this category to be approximately 34 million pounds annually. The discharge of these pollutants into sewage systems, especially solvents from shop towels, potentially affects POTW operations and discharges to receiving waters. The Agency believes that the economic impacts of guidelines on this category may be relatively high, because many facilities are small businesses.

Even though facilities in this category are located throughout the country, only two EPA regional offices identified this category as a priority candidate for effluent guidelines activity. Relative to other categories, it is difficult to develop POTW local limits for this category because of the number and concentrations of pollutants discharged and the need for additional wastewater treatability data. Thus the category ranks Medium for *Utility*.

Stripper Oil and Gas Extraction (40 CFR part 435 subpart F). This subcategory of the Oil and Gas Extraction point source category includes onshore oil facilities producing up to 10 barrels per day of crude oil and operating at the maximum feasible rate of production (40 CFR 435.60). Current guidelines are at the BPT level of control for stripper oil wells in the coastal and agricultural wildlife water use subcategories. No guidelines have been promulgated for onshore stripper oil wells.

The Stripper subcategory ranks Low for *Environmental Factors*. Although the Agency estimates the range of pollutants discharged by some stripper facilities to be similar to that produced by Coastal and Offshore facilities, many stripper facilities discharge smaller volumes of produced waters in proportion to their oil production level. (The aggregate flow of produced waters is greater than that for Coastal facilities.) This means that the quantity of toxic and nonconventional pollutants discharged per facility is relatively low. In addition, the Agency believes there is high probability that economic impacts could be an important issue in developing national guidelines, because by definition stripper facilities produce small amounts of oil.

With respect to *Utility*, however, the Stripper subcategory rates High. There are as many as 450,000 wells in the Stripper subcategory. This very large number of facilities presents a complex permit administration task.

Used Oil Reclamation and Re-Refining. This category is comprised of oil processors (reclaimers) and oil refiners that manufacture oil products such as lube oil, road oil, fuel oil, hydraulic fluids, and specialty hydrocarbons from used oil. The industry utilizies a system of collectors such as service stations and common collection facilities.

The Used Oil Reclamation and Re-refining category ranked Medium for *Environmental Factors*. There are relatively few facilities in the category (68 facilities, 30 of them indirect dischargers) and the quantities of wastes they generate appear to be relatively low. However, this industry recycles used products, preventing them

from entering the environment as wastes. The preparation of guidelines covering facilities in the category presents an opportunity for pollution prevention by encouraging the recovery of material resources through uniform national regulation. The Agency recognizes the need to examine the facilities carefully so that effluent limitations do not discourage waste reduction of this kind. The category ranked Low for *Utility* because of the relatively small number of dischargers and the consequently manageable task of issuing permits and local limits.

Drum Reconditioning. This industry consists of facilities that recondition steel and polyethylene drums for re-use. Currently no guidelines are in effect covering this category. The Drum Reconditioning category ranks Low for *Environmental Factors.* The industry was identified in the DSS as contributing an unknown quantity of hazardous wastes to POTWs. There are an estimated total of 450 facilities, of which 50 have direct discharges and 200 have indirect discharges, and approximately 200 facilities do not discharge wastewater. The Agency estimates the total average priority and nonconventional pollutant loadings by facilities in the category to be in the order of 12 million pounds per year (raw waste). In addition, many of the facilities in this category are small businesses, which increases the likelihood that economic impacts may limit the reductions in discharges that can be required by guidelines. The category ranked Medium for *Utility.* The wastestreams from the Drum Reconditioning category are variable and complex, but only two EPA regional offices recommended the category for priority development of guidelines even though the industry is spread throughout the country.

Solvent Recycling. This industry recycles spent solvents for re-use in fuel blends or as solvents. Currently no guidelines are in effect covering this category.

The Solvent Recycling category ranked Low for *Environmental Factors.* Although the category was listed in the DSS as a contributor of hazardous wastes to POTWs, the Agency estimates that 81 percent of the 210 facilities in the category already attain zero discharge with controls currently in place. In addition, the overall toxic pound-equivalent loadings from discharging facilities are lower than those of the preceding industry categories. Three EPA regional offices and the Office of Water Enforcement and Permits at headquarters recommended it for priority development of guidelines, reflecting the fact that indirect discharges from Solvent Recycling facilities are known to interfere with the treatement effectiveness of POTWs. Therefore, the category is ranked Medium for *Utility.*

Hospitals. Currently no guidelines are in effect covering the Hospitals category. This category ranked Low relative to the other categories for both *Environmental Factors* and *Utility.* Although the DSS found that hospitals contribute toxic pollutants to POTWs, EPA's follow-up analysis indicates that this category in fact contributes relatively small pollutant loadings. The follow-up study estimated that there are approximately 6,870 hospitals. Most hospitals were found to employ recovery systems for silver, one of the most troublesome pollutants, rather than disposing of silver wastes via their discharges to POTWs. EPA has no evidence that indirect discharges of liquid wastes (including infectious wastes) by hospitals are causing problems at POTWs. This explains the Low ranking for *Environmental Factors.* (The Agency is addressing solid wastes from hospitals, such as used hypodermic needles and blood vials, under the authority of RCRA Subtitle D and a pilot program established pursuant to the Medical Waste Tracking Act of 1988, 42 U.S.C. 6992 et seq.)

The Hospitals category ranked Low for *Utility* primarily as a result of a lack of interest by EPA regional offices, States and municipalities in seeking information and/or recommending the development of guidelines. The Agency believes this lack of interest is significant because it seems to reflect the lack of evidence of POTW and environmental problems due to hospital wastewaters. Second, it is significant that so few regional offices expressed an interest in priority identification of guidelines for this category in view of the large number of facilities in the category spread throughout the United States.

Paint Formulating (40 CFR part 446). Under BPT and BAT guidelines, NSPS and PSNS that are currently in effect, manufacturers of oil-based paint are prohibited from discharging wastewater. Current guidelines do not cover formulation of water-based paint. Therefore the application of ranking criteria for this category pertains to water-based paint formulators, for consideration of a potential new subcategory under Part 446.

The Paint Formulating category ranks Low for *Environmental Factors.* Paint formulating facilities were identified in the DSS as contributing toxic pollutants to POTWs, but the toxic pound-equivalent loadings were low relative to the other categories discussed in detail in this notice. In addition, fewer paint manufacturers are discharging to POTWs than at the time of the publication of the DSS. This appears to be a result in part of the installation of controls (treatment in place) by an increasing segment of the manufacturers of water-based paints.

This category also ranked Low for *Utility.* Even though there are approximately 340 out of 1,440 paint manufacturing facilities throughout the country with wastewater discharges, only two EPA regional offices recommended the development of guidelines for the portions of the industry that are not already covered. The decrease in indirect discharges and other factors, such as improved control over wastewaters that are discharged to POTWs, have caused POTW operators to assign a low priority to the development of guidelines covering this category.

VI. The Effluent Guidelines Plan

On the basis of its evaluations summarized in the preceding portion of today's notice, EPA has selected the industries for which new or revised effluent limitations guidelines and new source performance standards will be developed as a part of its current biennial plan under section 304(m). The number of rulemaking projects selected is based on the Agency's estimate of the resources required for each project and the expected level of available resources for the effluent guidelines program.

"Existing" guidelines are those covering categories of dischargers for which the Agency has previously promulgated BAT guidelines or new source performance standards. See section 304(m)(1)(A). "New" guidelines are those covering categories for which BAT limitations and NSPS have not been previously promulgated. See section 304(m)(1)(B). "New" guidelines thus include revisions to existing guidelines that do not contain BAT or NSPS limits (even though they may contain BPT limits), and guidelines for industries not currently covered by any guidelines.

The descriptions of the industry categories in today's notice are approximate; they are based on currently available data. EPA formally defines a category (or subcategory) when a proposed or final rule is published. As the Agency collects additional information, the scope of a

category for purpose of the development of guidelines may be revised.

A. Existing Effluent Guidelines and Standards

1. Rulemaking Actions: Revisions to Existing Guidelines

The Agency has selected the following industrial categories for revision of existing guidelines; the estimated schedule for promulgation is given below. Although section 304(m) does not mandate any schedule for the promulgation of revisions to existing regulations, the Agency is providing this information based on EPA's current best estimate of the time necessary to promulgate a defensible regulation.

Organic Chemicals, Plastics and Synthetic Fibers	1993
Pharmaceutical Manufacturing	1994
Pulp, Paper, and Paperboard	1995

a. *Organic Chemicals, Plastics and Synthetic Fibers* (40 CFR part 414). EPA promulgated regulations covering this industry on November 5, 1987 (52 FR 42522). The regulations were subsequently challenged by industry and NRDC in the United States Court of Appeals for the Fifth Circuit [*Chemical Manufacturers Association v. E.P.A.*, 870 F.2d 177, *mod.* 885 F.2d 253 (5th Cir., 1989)]. In response to petitions for rehearing, the Court modified its initial decision. Even though the initial decision left the entire regulation in force, the Court required EPA to consider establishing more stringent toxic pollutant limitations for a segment of the industry that must comply with subpart J limitations (approximately 30 direct-discharge plants without biological treatment) and more stringent NSPS based on recycling of wastewater. In the October 10, 1989 revision of the initial decision, the court remanded for further rulemaking the subpart J limitations for 19 pollutants based on in-plant biological treatment technology. The Agency is initiating efforts to collect additional data and information for technical and economic studies to provide a basis for proposing and promulgating appropriate regulations.

In the interim, as a result of settlement agreements reached during litigation on the rule, EPA will propose other revisions to the regulation in 1990. This proposal will include provisions to (1) allow regulatory authorities to establish cyanide limitations and standards based on BPJ for elevated levels of non-amenable cyanide that result from unavoidable cyanide at the process source of cyanide-bearing waste streams, (2) allow permit authorities to establish metals limitations and standards to accommodate low background levels in "non-metal-bearing" waste streams that result from corrosion of construction materials or from contamination of raw materials, and (3) correct listing errors in appendices A and B of 40 CFR part 414.

EPA published a notice of revocation for one pollutant pursuant to a settlement agreement reached during litigation (along with technical corrections) on June 29, 1989 (54 FR 27351).

This category was not formally ranked because the Fifth Circuit rendered its decision late in the 304(m) process. In any event, the judicial decision and the settlement agreements would have made the Mandate factor applicable.

b. *Pharmaceutical Manufacturing* (40 CFR part 439). EPA has begun on-site sampling and technical and economic surveys of the industry, and will follow with engineering and environmental studies.

c. *Pulp, Paper, and Paperboard* (40 CFR part 430). Detailed review of the effluent limitations guidelines based upon best practicable technology (BPT) for all existing sources is under way, with revisions to address dioxins and furans and any other pollutants of concern (e.g., conventional pollutants, other chlorinated organic compounds) for kraft and sulfite mills.

2. Reviews of Existing Guidelines

The Agency will review the following promulgated guidelines for potential future revision. These reviews may conclude that revised guidelines will be prepared, that guidance for permit writers and POTWs should be developed, or that the categories do not merit priority for the preparation of revised guidelines. Results of the reviews will appear in future biennial plans under section 304(m), the semiannual *Regulatory Agenda*, and other appropriate notices.

Petroleum Refining
Timber Products Processing
Textile Mills

a. *Petroleum Refining* (40 CFR part 419). EPA is gathering new information on petroleum refineries, based on recent findings concerning the presence of dioxins and furans in some refinery wastestreams. In addition, based on a recommendation from the Agency's Region 9 permit office, a review of the water use practices in this industry has been initiated. Based on this review, certain water conservation practices may be incorporated into the flow basis for the existing production mass-based regulations.

b. *Timber Products Processing* (40 CFR part 429). EPA has previously issued BPT, BAT, NSPS, PSES and PSNS guidelines and standards covering three Wood Preserving subcategories of the Timber Products Processing category [Water Borne or Nonpressure Subcategory, subpart F; Steam Subcategory, subpart G (BAT reserved); and Boulton Subcategory (subpart H)]. Discharges from these subcategories include metals, pesticides, and various toxic organic compounds. The Agency has collected a limited amount of data to evaluate whether the guidelines for subcategories F, G and H should be revised to address those pollutants. The Agency's Office of Solid Waste is in the process of listing additional wastes and wastewaters from wood preserving processes under RCRA. This would subject those wastes and wastewaters to regulation under RCRA Subtitle C, except as excluded (for example, under 40 CFR 261.4). See 53 FR 53288–9 (December 30, 1988). As resources allow, the Agency will collect additional information and prepare a preliminary data summary.

c. *Textile Mills* (40 CFR part 410). EPA included the Textile Mills category in the DSS. The Agency is concerned about discharges from textile mills as a result of recommendations from its Region 1 staff; however, the available data were considered insufficient to permit preparation of a preliminary data summary and detailed comparison with the categories for which preliminary data summaries were prepared. As resources allow, the Agency will collect additional information on the industry in order to prepare a preliminary data summary.

B. New Guidelines

1. Rulemaking Actions

In response to sec. 304(m), EPA has undertaken or is continuing the development of the following "new" guidelines—i.e., guidelines covering categories discharging toxic or nonconventional pollutants for which BAT guidelines and NSPS for toxic and nonconventional pollutants have not been previously published. The estimated promulgation dates are based on current projections of available resources and of the time required to develop a defensible rule covering the category (see section IV of today's notice). It is assumed that the data collected during the development of the guidelines will support the ultimate promulgation of guidelines for these

categories. (The alternative to regulations would be development of guidance documents and technical assistance for permit writers.) Even though a category is included in this list, the Agency retains discretion to determine that guidelines are not appropriate for the listed categories. Adjustments to these projections will appear in future biennial plans under section 304(m) and the semiannual *Regulatory Agenda*.

Offshore Oil and Gas Extraction	1992
Pesticide Chemicals (manufacturing subcategory)	1992
Pesticide Chemicals (formulating/packaging subcategory)	1994
Hazardous Waste Treatment, Phase 1	1995
Machinery Manufacturing and Rebuilding	1995
Coastal Oil and Gas Extraction	1995

a. *Offshore Oil and Gas Extraction* (40 CFR part 435, subpart A). On August 26, 1985 EPA proposed BAT and BCT guidelines and NSPS covering certain wastestreams discharged by the offshore facilities. Additional wastestreams will be covered by a proposal in 1990, and promulgation of a final rule is planned for 1992.

b. *Pesticide Chemicals* (40 CFR part 455). The Agency has promulgated BPT guidelines covering the Organic Pesticides Chemicals Manufacturing Subcategory, the Metallo-Organic Pesticides Chemicals Manufacturing Subcategory and the Pesticides Chemicals Formulating and Packaging Subcategory. BAT rules were withdrawn by the Agency in 1986. Since that time EPA has begun a major new data collection effort as the starting point for developing a new rulemaking. This effort includes on-site wastewater sampling. While the sampling and analytical activities are not yet complete, early findings confirm previous studies showing that the industry continues to discharge substantial amounts of toxic and nonconventional pollutants directly to surface waters and to POTWs. The BAT guidelines will be promulgated in two phases—the first covering manufacturing facilities, and the second formulating and packaging facilities.

c. *Hazardous Waste Treatment.* Development of regulations for hazardous waste treatment facilities will be done in two phases. The Phase 1 regulation will cover facilities described in section V.C.4 of today's notice—facilities treating aqueous hazardous wastes. The Agency has not yet scheduled a Phase 2 regulation, which would regulate hazardous waste incinerators and landfill leachate discharges.

The complexity of this category makes it infeasible for the Agency to cover all the waste streams in one rulemaking action. As is explained in section V.C.4, Phase 1 will cover aqueous treatment facilities because they discharge the largest amount of pollutants of the groups within the category, and have generated the highest level of concern among POTW and permit authorities. Additionally, some landfill leachate is sent to aqueous treatment facilities for treatment, so those wastes will be covered in the Phase 1 rule.

d. *Machinery Manufacturing and Rebuilding.* EPA is developing technical and economic surveys for the MM&R category, and will promulgate guidelines covering Aircraft, Aerospace, Hardware, Ordnance, Stationary Industrial Equipment, Mobile Industrial Equipment and Electronic Equipment by 1995.

e. *Coastal Oil and Gas Extraction* (40 CFR part 435, subpart D). Currently only BPT guidelines have been promulgated for the Coastal subcategory of the Oil and Gas Extraction category. EPA is considering modification of the definition of "coastal," which determines the applicability of the rules to particular facilities, and is planning to promulgate BAT and BCT guidelines, and NSPS by 1995. The Agency published a Request for Comments on November 8, 1989 (54 FR 46919).

2. Continuation of Studies

EPA is conducting studies on several categories for potential inclusion in future biennial plans as categories for which new guidelines will be prepared. Preliminary data summaries or similar documents have been developed for each category. These are included in the record for today's notice. Seven of the eight industries are listed as part of EPA's follow-up on the DSS. The Stripper subcategory of the Oil and Gas Extraction Category will be studied further during the development of new guidelines covering the Coastal subcategory, a related segment of the oil and gas extraction category.

Drum Reconditioning
Hospitals
Industrial Laundries
Paint Formulating
Solvent Recycling
Stripper Oil and Gas Extraction
Transportation Equipment Cleaning
Used Oil Reclamation and Re-Refining

VII. Summary of Changes from Proposed Notice

This section identifies the most significant changes from the August 25, 1988 proposal notice.

A. Clarification of Evaluation Criteria

Section VI of the proposal notice (53 FR 32588) listed the decision criteria EPA would consider in determining whether to initiate the preparation of new or revised guidelines. Section V.B.1 of today's notice discusses the Agency's refinements in and additions to the evaluation criteria used for setting rulemaking priorities. These criteria provide a means for ranking industries with regard to their potential environmental risk, the relative utility of regulations to permit authorities and POTWs, and the existence of statutory provisions or judicial orders concerning the development of guidelines for specific categories.

B. Consolidated Tables on Existing and New Regulations

In response to public comment, the Agency has prepared a table that lists all existing effluent guidelines and standards and separately lists categories for which guidelines are planned or are being considered. These lists appear at appendix A of today's notice.

VIII. Public Comments

The public comment period for the proposal notice closed on October 25, 1988. The Agency received comments that covered approximately 40 topics from industries, an environmental group and on local government (POTW). For the most part, the comments submitted and the issues raised supported the general approach outlined in the notice. Several commenters suggested changes that the Agency has incorporated in today's notice. These changes are elaborated on below. The summary in this section highlights the more significant comments submitted. The administrative record for today's notice includes a complete text of the comments and the Agency's responses.

One commenter, the Natural Resources Defense Council (NRDC), commented adversely on several significant aspects of the proposal notice. NRDC has filed suit against the Agency, alleging that EPA has violated sec. 304(m) and other statutory authorities requiring the promulgation of effluent limitations guidelines, new source performance standards and pretreatment standards (*NRDC and Public Citizen, Inc.* v. *Reilly*, D.D.C. No. 89-2980).

A. NRDC Comments

1. Industry Selection Criteria

NRDC commented that, in its views, section 304(m) requires EPA to identify in the first 304(m) biennial plan *all* categories of sources discharging toxic or nonconventional pollutants for which guidelines have not been promulgated. If an industry discharges more than trivial amounts of toxic or nonconventional pollutants, NRDC commented that EPA must include that category in the first 304(m) plan and must promulgate guidelines for all such categories no later than February 1991. NRDC also commented that the only permissible criterion for inclusion of a category in a 304(m) plan is whether facilities in that category discharge toxic or nonconventional pollutants in more than trivial amounts.

For the reasons set forth in section III.A of today's notice, the Agency disagrees with NRDC's interpretation of sec. 304(m). The language of the statute contains nothing to the effect that, by February, 1991, EPA must promulgate guidelines covering all industry categories discharging more than trivial amounts of toxic or nonconventional pollutants. To the contrary, EPA believes section 304(m) establishes a continuing planning process under which new and revised guidelines will be published in phases.

NRDC's reading of the statute rests primarily on two sentences from the 1985 Senate Report on S. 1128, a predecessor to the Water Quality Act, to the effect that "[g]uidelines are required for any category of sources discharging significant amounts of toxic pollutants" and that "any non-trivial discharges from sources in a category must lead to effluent guidelines." [Senate Report No. 99–50 (99th Congress, 1st Session, 1985), pp. 24–25.] However, this language does not direct EPA to promulgate guidelines for all categories discharging more than trivial amounts of toxic or nonconventional pollutants by February, 1991, as NRDC urges. In addition, the Conference Committee report does not contain the language concerning "non-trivial" discharges on which NRDC relies so heavily.

Accordingly, EPA disagrees with NRDC's comments concerning the scope of section 304(m). The Agency believes it has discretion to determine, in the fashion laid out in this notice, which industry categories are to be included in the initial plan for development of new or revised guidelines, and which categories are to be included in future biennial plans.

2. EPA Screening Process

In its comments, NRDC criticized several aspects of EPA's screening process and the proposed criteria for selection of categories for the development of new or revised guidelines, as set forth in section V.B. of the August 25, 1988 notice (53 FR 32588). First, NRDC argued generally that the Agency improperly intends to apply the 304(m) process to determine *whether* to issue guidelines in particular industry categories. However, this is not the Agency's intention. EPA is using the 304(m) process to set *priorities* for the preparation of new or revised guidelines, not to determine that guidelines covering particular categories will never be issued.

Second, in the August 25, 1988 notice, EPA described the 304(m) process as including a review of available information, collection of new data and preparation of "decision documents." NRDC objected to the use of decision documents, arguing that they amount to a "regulatory cost-benefit analysis for deciding which categories should be subject to guidelines." However, EPA does not intend to use the decision documents, which have been renamed Preliminary Data Summaries, for that purpose. Preliminary Data Summaries are used to provide Agency decision makers with factual data and estimates that will be useful in applying the decision criteria set forth in today's notice. Thus the documents will assist in setting priorities for the initiation of guideline development.

3. Specific Criteria

NRDC also commented that many of the specific criteria that EPA included in the August 25, 1988 notice are "illegal." These comments were based partly on NRDC's assertion that the only permissible criterion for inclusion of an industry category in a 304(m) plan is whether that category discharges more than trivial amounts of toxic or nonconventional pollutants. NRDC also commented erroneously that EPA will use the criteria to determine whether or not a category of dischargers should be subject to national guidelines. As is stated above, the criteria are used to set relative priorities for the development of new guidelines and the revision of existing guidelines.

NRDC also commented that most of the criteria included in the August 25, 1988 are improper because they are not factors to be considered by EPA in promulgating technology-based guidelines. NRDC is correct that the criteria the Agency is using to determine the priority of rulemaking activities are not the same as the factors that the Agency is to consider under the Clean Water Act in setting technology-based guidelines. However, section 304(m) does not require the use of the factors set forth in sections 304(b) and 306 in setting rulemaking priorities. The Agency believes that the criteria considered in promulgating technology-based guidelines are not necessarily appropriate for determining rulemaking priorities. For example, the utility of a national guideline to permit writers is not a factor that the Agency must consider in promulgating technology-based guidelines, but it is relevant to efficient allocation of agency resources in developing guidelines to be used by permit writers in controlling the discharge of toxic and nonconventional pollutants.

In response to the comments of NRDC and others regarding the specific criteria included in the August 25, 1988 notice, EPA has refined and elaborated upon the criteria it intends to use in setting rulemaking priorities under section 304(m). (See section V.B.1 of today's notice.) In response to comments, the Agency also has provided greater detail in this notice regarding the definition of the critiera and how they are to be applied.

4. Listing of Specific Industries

NRDC also commented that the DSS and other studies demonstrate that numerous industry categories discharge significant amounts of toxic and nonconventional pollutants. From this, NRDC concludes that all such categories must be included in the initial 304(m) plan and guidelines for these categories must be published by February, 1991. EPA disagrees with the fundamental premise that all industry categories it knows discharge more than trivial amounts of toxics or nonconventionals must be included in the first 304(m) list. However, as is explained in the August 25, 1988 proposal and elsewhere in this notice, the Agency has considered the DSS and several other available studies as a source of information in formulating its plans to implement section 304(m).

5. Amendments to Existing Guidelines

NRDC contends that amendments are needed to a variety of existing guidelines and that the Agency must complete revisions of these guidelines by February 1991 at the latest. However, as the Agency stated in the August 25, 1988 notice, section 304(m) does not mandate the promulgation of revisions to existing guidelines within a specified time (53 FR 32589). EPA reads section 304(m) as providing the Agency with

discretion to determine which guidelines to revise, and to establish reasonable schedules for the promulgation of revisions. In listing categories for revision, EPA has applied the same set of criteria that are applicable to the listing of new industries.

B. Other Comments

1. Proposed Plan in General; Regulations for Existing vs. "New" Industries

Several commenters supported the general scheme proposed by the Agency for reviewing available data and setting rulemaking priorities. However, there were also recommendations that EPA concentrate initially on promulgation of regulations for industries not covered by any existing guidelines, and only after these are complete should the Agency consider revisions to existing guidelines.

The Agency believes that a combined approach—planning the development of guidelines for "new" categories along with revisions to existing guidelines—is more appropriate and consistent with section 304(m). The criteria that EPA is using to set rulemaking priorities can be (and have been) applied to evaluate all categories that are potentially subject to section 304(m), whether or not existing guidelines cover the category. A principal example is the pulp and paper industry, where newly-acquired data indicate that some plants are discharging highly toxic pollutants—dioxins and furans. The fact that the industry is covered by an existing effluent guideline is not persuasive if those regulations do not limit the pollutants of concern. The Agency will not delay revision of a regulation simply because other industries are not yet covered by effluent guidelines and standards.

2. Decision Documents (Preliminary Data Summaries)

One commenter requested clarification or definition of the term "decision document," as opposed to the already familiar term "development document."

EPA described the "decision document" in section V.B.3 of the proposal notice (53 FR 32588). The Agency has changed the name of the document to "Preliminary Data Summary" because the content and use of the document might be misunderstood. It represents a summary of information and preliminary technical findings which the Agency has obtained during its initial screening process to identify potential industry candidates and assist in establishing priorities for initiation of rulemaking, using the criteria described in section V.B.1 of today's notice. The content of a preliminary data summary provides Agency decision-makers with factual information in an organized format that supports application of the decision criteria. It is the intent of the Agency to make this information available as it is compiled.

In contrast, the "development document" is a more detailed compilation of background information on a particular industrial category for which a proposed or final rule has been developed. It is published at or about the time the rule is published in the **Federal Register.** This document provides an explanation of much of the information the Agency considered in developing the national effluent guideline or standard. Specific information in the document generally includes: A profile of the entire industry; a summary of all data collection activities conducted by the Agency, including the results of sampling, analysis and verification programs; an identification of particular wastewater characteristics; identification of the appropriate subcategories and pollutants regulated or excluded from regulation; a description of the various treatment technologies available and the options selected; and the overall results of related economic and environmental studies affecting the particular regulatory effort.

3. Rulemaking for Specific Industries

Five commenters recommended that the Agency consider revisions to existing regulations or promulgate new regulations for certain industries. The Agency considered all such comments in the development of the Effluent Guidelines Plan described in today's notice.

One of the regulations recommended for revision, Nonferrous Metals Manufacturing (40 CFR part 421), is the subject of an ongoing rulemaking action which is described in section IX of today's notices.

One commenter offered recommendations on a specific wastestream, landfill gas condensate, that EPA should include in a regulation for the Hazardous Waste Treatment category. As discussed in section VI of today's notice, the Agency plans to promulgate a regulation for this category, and will consider all potential waste streams as additional data are gathered and the proposed rule is developed. (The Phase 1 regulation will cover facilities treating aqueous hazardous wastes. The Phase 2 regulation—for which a schedule has not been developed—will cover landfill leachate discharges and hazardous waste incinerators.)

Other commenters recommended revisions to existing regulations for the Metal Finishing, and Mineral Mining and Processing categories, and initiation of a regulation covering offshore mining (dredging). None of these commenters submitted specific data to support their assertions, and the Agency's judgment on the recommended industries, based on the application of the evaluation criteria, is that their selection for new or revised regulations is not warranted at this time. As the Agency acquires and reviews new data on these or other industries, they will be taken into account in future biennial plans.

4. Validity of Data Sources

One commenter questioned the validity of information gathered from technical studies such as the DSS, Toxic Release Inventory data, and citizen complaints.

The Agency has clarified in section V.B.3 of today's notice how data obtained through the SARA program and citizen complaints will be used. Overall, EPA intends to use the technical findings from reports generated by other regulatory mechanisms such as SARA, or environmental concerns raised by citizen complaints, to assist in identifying or screening potential candidates for new or revised guidelines and standards. EPA does not intend to use data from these other sources without additional follow-up or further verification of their validity and reliability.

IX. Ongoing and Completed Actions

In section IV and appendix A of the proposal notice (53 FR 32589) the Agency listed existing regulations which were being revised or reviewed for possible revision. The Agency's plans with respect to three of those categories (Pharmaceutical Manufacturing, Timber Products and Textile Mills) are described in section VI.A of today's notice. Revisions to two regulations (Nonferrous Metals Forming and Aluminum Forming) have been promulgated since the August 25, 1988 notice. The two remaining categories (Nonferrous Metals Manufacturing and Copper Forming) are the subject of rulemaking activities in progress. These two were not among the 15 categories that EPA ranked, even though the pending rulemaking activities will continue, for the reasons stated below.

A. Completed Actions

1. *Nonferrous Metals Forming* (40 CFR part 471). EPA promulgated revisions to the Nonferrous Metals Forming regulation on March 17, 1989 (54 FR 11346). A technical correction to the regulation was published on April 4, 1989 (54 FR 13606).

2. *Aluminum Forming* (40 CFR part 467). EPA promulaged revisions to the Aluminum Forming regulation on December 27, 1988 (53 FR 52366).

B. Ongoing Actions

1. *Nonferrous Metals Manufacturing* (40 CFR part 421). EPA proposed revisions to the Nonferrous Metals Manufacturing Regulation on April 28, 1989 (54 FR 18412). The Agency has received public comments on the proposal and plans to promulgate a final rule by the spring of 1990. This category was not formally ranked because of the relatively limited nature of the rulemaking and because, as the Agency explained in detail in the 304(m) proposal notice, this rulemaking is the result of settlement agreements with industry. See 53 FR 32586 (August 25, 1988).

2. *Copper Forming* (40 CFR part 468). EPA also is preparing relatively limited amendments to the Copper Forming regulations as a consequence of a settlement agreement with a beryllium copper alloy manufacturer in *Brush Wellman, Inc.* v. *E.P.A.*, No. 84–1087 (7th Cir., September 29, 1984). Thus this category was not formally ranked. The Agency will propose one or more new subparts to the regulation for beryllium alloys in Spring 1990.

X. Future Process for Review of Existing Guidelines

The Agency has promulgated 51 regulations containing effluent guidelines, new source performance standards and pretreatment standards since 1974. Over time, revision of the guidelines and standards may be appropriate as a result of changes in industry production, the emergence of new control technologies, changes in the nature of wastewater discharges or non-water quality environmental impacts or other factors relevant to the statutory criteria for setting effluent limitations guidelines.

In the past, EPA has reviewed existing guidelines in the course of its regular activities implementing the Clean Water Act. For example, EPA acquires new information about categories of dischargers that are subject to existing guidelines through reports and other data sources of the type described in section V.B.3 of the final notice. In addition, communication with the Agency's field organization of regional offices, permit writing agencies in the 39 States that have delegated authority to issue NPDES permits, and POTWs whose influent includes industrial wastewater is an excellent source of information relevant to the review of existing guidelines. EPA meets regularly with States that administer the NPDES program, sponsors or participates in workshops attended by representatives of headquarters and regional offices, State agencies and municipalities. The topics covered may include budget and staff planning; changes in EPA policy; revisions to the NPDES permit issuance regulations (40 CFR parts 122 through 125), general pretreatment regulations (40 CFR part 403) or effluent guideline regulations; enforcement issues; or technical information on wastewater treatment. The application of effluent guidelines is integral to these discussions, and recommendations for revisions to regulations are sometimes raised. In preparing today's biennial plan, EPA has used these sources of information to review existing guidelines and select categories for revision and for further study.

The Agency has decided to adopt more formal procedures for future review of existing guidelines. Future reviews of existing guidelines will involve preparation of written nomination documents by EPA headquarters recommending guidelines for revision and development. The nominations will be based on public comments and data sources such as those described in section V.B.3 of today's notice. The recommendations will be circulated for evaluation and comment by EPA headquarters to its regional offices every January. This process will draw on the needs and experiences of the field staff in the regional offices and States who are engaged with headquarters in a working relationship in the NPDES program.

XI. Future Notices

A. Future Enhancements to the Effluent Guidelines Planning Process

EPA intends to continue its refinements to the priority-setting criteria described in today's notice. For example, the Agency is considering giving considerable weight in future biennial plans under section 304(m) to categories for which guidelines will yield substantial water quality benefits. Although it is difficult to obtain sufficient data to assess water quality impacts and their reduction during the preliminary study of an industry, the Agency will attempt to develop means of estimating the potential for improvement in water quality as a result of promulgating new or revised guidelines for a category. This will involve the development of sufficient information on the number and location of dischargers, the quantities and types of pollutants discharged, probable reductions in pollutant discharges and characteristics of the receiving stream to estimate water quality improvements that may result from promulgating an effluent guideline for an industry. Water quality improvement would not be used as a factor in setting technology-based limitations themselves.

B. Future Biennial Plans

EPA will publish another plan 24 months from today's notice, and biennially thereafter. The plan will contain revisions to the list of industries which are subject to review and/or rulemaking. Industries listed in today's notice for further study may be designated for rulemaking in the next 304(m) notice. In that notice and future notices, the Agency may also schedule rulemaking actions for other industries not listed in today's notice, based on public comments received and new data made available to the Agency.

C. Public Comment

The Agency invites public comment on all issues relating to the next biennial plan and future plans under section 304(m). Comments will be accepted until July 2, 1990. In particular, EPA invites comment on categories of dischargers that EPA should select in the next biennial plan for the preparation of new or revised guidelines. All categories discharging toxic or nonconventional pollutants are general candidates for rulemaking. As is explained in section V.A. of today's notice, in preparing future biennial plans under section 304(m), EPA intends to review and reevaluate all categories that may discharge toxic or nonconventional pollutants, but that are not among the priority categories for which new or revised guidelines will be prepared under today's biennial plan. EPA will collect additional data, as appropriate, and will determine which of these categories merit inclusion in future biennial 304(m) plans.

The eight categories of dischargers which the Agency ranked in section V.C.4, but for which the Agency has not decided to prepare new or revised guidelines, are specific candidates for the development of new or revised guidelines. These categories are Transportation Equipment Cleaning, Industrial Laundries, Stripper Oil and

Gas Extraction, Used Oil Reclamation and Re-Refining, Drum Reconditioning, Solvent Recycling, Hospitals and Paint Formulating. The Agency is continuing its study of each of these categories. See section VI.B.2. The three categories of dischargers for which the Agency is reviewing existing guidelines also are specific candidates for the preparation of revised guidelines. These categories are Petroleum Refining (40 CFR part 419), Timber Products Processing (40 CFR part 429) and Textile Mills (40 CFR part 410). The Agency's plans for review are discussed in more detail in section V.A.2 of today's notice. The remaining eight industry groups within the Machinery Manufacturing and Rebuilding Category (described in section V.C.4) will also be considered. If and when EPA decides to initiate rulemakings for these categories or others, it will identify them in a future biennial plan under section 304(m).

EPA will attempt to consider all comments submitted sufficiently in advance of the publication of the next biennial plan. Any comments that the Agency cannot consider (as a result of time constraints) will be considered in preparing the subsequent notice.

Comments on proposed guidelines for specific categories of dischargers will be accepted, as usual, according to the time periods specified in notices published as part of rulemaking proceedings to establish effluent guidelines for the categories.

XII. Economic Impact Assessment; OMB Review

This notice contains a plan for the review and revision of existing effluent guidelines and for the selection of priority industries for new regulations. This notice is not a rulemaking; therefore, no economic impact assessment has been prepared. EPA will provide economic impact analyses or regulatory impact analyses, as appropriate, for all of the future effluent guideline rulemakings developed by the Agency.

Today's notice has been reviewed by the Office of Management and Budget under Executive Order 12291.

Dated: December 20, 1989.

William K. Reilly,

Administrator.

Appendices

Appendix A—Master Chart of Industrial Categories and Regulations

Existing Effluent Guideline Regulations

This table lists all previously promulgated effluent guidelines and standards, whether or not they contain BAT limitations or new source performance standards. The Agency is publishing the table in this form to serve as a convenient reference document.

Category: Category Title of Regulation.
CFR: Code of Federal Regulations Part Number (under title 40).
Standards: Standards promulgated for the category.
Prom. Dt.: Date of Promulgation or most recent amendment.
Contact: Contact Person at EPA Industrial Technology Division.
Revise: Projected promulgation date for revised regulation.

Category	CFR	Standards	Prom. Dt.	Contact	Revise	Comments
Aluminum forming	467	BPT, BAT, NSPS, PSES, PSNS	12/27/88	George Jett		
Asbestos manufacturing	427	BPT, BAT, NSPS, PSES, PSNS	4/25/75	Thomas Fielding		
Battery manufacturing	461	BPT, BAT, NSPS, PSES, PSNS	8/28/86	Sabita Rajvanshi		
Builder's paper and board mills	431	BPT, BCT, BAT, NSPS, PSES, PSNS.	12/17/86	Jennie Helms		
Carbon black manufacturing	458	BAT, NSPS, PSNS	1/9/78	George Jett		
Cement manufacturing	411	BPT, BCT, BAT, NSPS, PSES, PSNS.	8/29/79	Ronald Kirby		
Coal mining	434	BPT, BAT, NSPS,	10/9/85	Bill Telliard		
Coil coating	465	BPT, NSPS, PSES, PSNS	8/24/84	Ernst Hall		
Copper forming	468	BPT, BAT, NSPS, PSES, PSNS	6/20/86	George Jett		Revisions to be proposed Spring 1990.
Dairy products processing	405	BPT, BCT, NSPS, PSES, PSNS	7/9/86	Donald Anderson		
Electroplating	413	PSES	9/4/84	Sabita Rajvanshi		
Electrical and electronic components	469	BPT, BAT, NSPS, PSES, PSNS	1/31/85	Sabita Rajvanshi		
Explosives manufacturing	457	BPT	3/9/76	Thomas Fielding		
Feedlots	412	BPT, BAT, NSPS, PSES, PSNS	2/11/75	Donald Anderson		
Ferroalloy manufacturing	424	BPT, BCT, BAT, NSPS, PSNS	7/9/86	George Jett		
Fertilizer manufacturing	418	BPT, BCT, BAT, NSPS, PSNS	7/29/87	Thomas Fielding		
Fruits and vegetables processing	407	BPT, BCT, NSPS, PSES, PSNS	7/9/86	Donald Anderson		
Glass manufacturing	426	BPT, BCT, BAT, NSPS, PSNS	7/9/86	Wendy Smith		
Grain mills manufacturing	406	BPT, BCT, NSPS, PSES, PSNS	7/9/86	Donald Anderson		
Gum and wood chemicals manufacturing	454	BPT	5/18/76	Richard Williams		
Hospitals	460	BPT	5/6/76	Frank Hund		to be reviewed.
Ink formulating	447	BPT, BAT, NSPS, PSNS	7/28/75	Richard Williams		
Inorganic chemicals	415	BPT, BAT, NSPS, PSES, PSNS	9/25/84	Thomas Fielding		
Iron and steel manufacturing	420	BPT, BCT, BAT, NSPS, PSES, PSNS.	5/17/84	Ernst Hall		
Leather tanning and finishing	425	BPT, BCT, BAT, NSPS, PSES, PSNS.	3/21/88	Donald Anderson		
Meat products	432	BPT, BCT, PSES, PSNS	7/9/86	Donald Anderson		
Metal finishing	433	BPT, BAT, NSPS, PSES, PSNS	11/7/86	Sabita Rajvanshi		
Metal molding and casting	464	BPT, BAT, NSPS, PSES, PSNS	6/16/86	Ernst Hall		
Mineral mining and processing	436	BPT	3/10/78	Matt Jarrett		
Nonferrous metals forming and metal powders	471	BPT, BAT, NSPS, PSES, PSNS	4/4/89	George Jett		
Nonferrous metals manufacturing	421	BPT, BAT, NSPS, PSES, PSNS	1/21/88	Ernst Hall	Spring 1990.	Revisions proposed 4/28/89.
Oil and gas extraction	435	BPT	7/21/82	Karen Troy		Revisions proposed 8/26/85.
(Offshore subcat.)					1992	
(Coastal subcat.)					1995	Request for comments 11/8/89.

Category	CFR	Standards	Prom. Dt.	Contact	Revise	Comments
(Stripper subcat.)						to be reviewed.
Ore mining and dressing	440	BPT, BAT, NSPS	5/24/88	Matt Jarrett		
Organic chemicals, plastics and synthetic fibers	414	BPT, BAT, NSPS, PSES, PSNS	6/29/89	Woody Forsht	1993	
Paint formulating	446	BPT, BAT, NSPS, PSNS	7/28/75	Richard Williams		to be reviewed.
Paving and roofing materials (tars and asphalt)	443	BPT, BAT, NSPS, PSNS	7/24/75	Bill Telliard		
Pesticide chemicals	455	BPT	9/29/78			
(Manufacturing subcategory)				Thomas Fielding	1992	
(Formulating/Packaging subcat.)				Janet Goodwin	1994	
Petroleum refining	419	BPT, BCT, BAT, NSPS, PSES, PSNS.	8/12/85	Woody Forsht		to be reviewed.
Pharmaceutical manufacturing	439	BPT, BCT, BAT, NSPS, PSES, PSNS.	12/16/86	Frank Hund	1994	
Phosphate manufacturing	422	BPT, BCT, BAT, NSPS	7/9/86	Thomas Fielding		
Photographic	459	BPT	7/14/76	Ernst Hall		
Plastics molding and forming	463	BPT, BCT, BAT, NSPS, PSES, PSNS.	12/17/84	Woody Forsht		
Porcelain enameling	466	BPT, BAT, NSPS, PSES, PSNS	9/6/85	George Jett		
Pulp, paper, and paperboard	430	BPT, BCT, BAT, NSPS, PSES, PSNS.	12/17/86	George Health	1995	
Rubber manufacturing	428	BPT, BAT, NSPS, PSNS	4/25/75	Joseph Vitalis		
Seafood processing	408	BPT, BCT, NSPS, PSES, PSNS	7/9/86	Donald Anderson		
Soap and detergent manufacturing	417	BPT, BAT, NSPS, PSES, PSNS	2/11/75	Woody Forsht		
Steam electric power generating	423	BPT, BCT, BAT, NSPS, PSES, PSNS.	7/8/83	Joseph Vitalis		
Sugar processing	409	BPT, BCT, NSPS, PSES, PSNS	7/9/86	Donald Anderson		
Textile mills	410	BPT, BAT, NSPS, PSES, PSNS	9/1/83	Richard Williams		to be reviewed.
Timber products processing	429	BPT, NSPS, PSES, PSNS	2/12/81	Richard Williams		to be reviewed.

Additional Categories for Which Guidelines are Being Prepared or Considered

Category	Contact	Under review*	Promulgation date
Drum Reconditioning	Ernst Hall	X	
Hazardous Waste Treatment, Phase 1	Debra DiCianna		1995
Industrial Laundries	Frank Hund	X	
Machinery Manufacturing and Rebuilding	Sabita Rajvanshi		1995
Solvent Recycling	Debra DiCianna	X	
Transportation Equipment Cleaning	Ernst Hall	X	
Used Oil Reclamation and Re-Refining	Woody Forsht	X	

*Under Review: Agency is reviewing data on industry. EPA will determine whether or not new guidelines will be prepared and will announce its determinations in future biennial plans under CWA sec. 304(m) and in the *Regulatory Agenda*.

Appendix B—Preliminary Data Summary Ordering Information

Copies of Preliminary Data Summaries referred to in today's notice may be purchased in microfiche or printed form, by writing to the following address: National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, Telephone (703) 487–4650.

Specify the NTIS Accession Number(s) when ordering.

Document title	NTIS accession No.
Preliminary Data Summary for the Coastal/Onshore/Stripper Subcategories of the Oil and Gas Extraction Category.	PB90–126434
Preliminary Data Summary for the Drum Reconditioning Industry.	PB90–126491
Preliminary Data Summary for the Hazardous Waste Treatment Industry.	PB90–126517
Preliminary Data Summary for the Hospitals Point Source Category.	PB90–126459
Preliminary Data Summary for Industrial Laundries.	PB90–126541
Preliminary Data Summary for the Machinery Manufacturing and Rebuilding Industry.	PB90–126525
Preliminary Data Summary for the Paint Formulating Point Source Category.	PB90–126475
Preliminary Data Summary for the Pesticide Chemicals Point Source Category.	PB90–126426
Preliminary Data Summary for the Pharmaceutical Manufacturing Point Source Category.	PB90–126533
Preliminary Data Summary for the Pulp, Paper and Paperboard Point Source Category.	PB90–126442
Preliminary Data Summary for the Solvent Recycling Industry.	PB90–126467
Preliminary Data Summary for the Transportation Equipment Cleaning Industry.	PB90–126483
Preliminary Data Summary for the Used Oil Reclamation and Re-Refining Industry.	PB90–126509

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